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THE QUARTERLY JOURNAL ABOUT IDEAS AND LEARNING

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WHATS GOING RIGHT WITH INDIAN EDUCATION

PUNISHED BY
REWARDS

HOW TO WRITE
(AND WHY BOTHER)

LOCAL HERO/
PUBLIC ENEMY

5 GOOD REASONS
TO VISIT MORI

LENNY AND THE
BABY ROBOTS

TECHNICOLOR
MATH

BOOKS OF HOPE

THE KITE RUNNER:
WHY IT MATTERS



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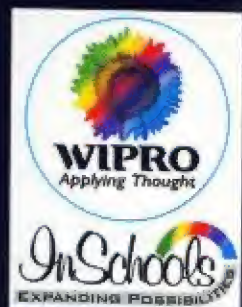
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PUNISHED BY REWARDS

Between a carrot and a stick oft stands a donkey.

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COVER PHOTOGRAPH AND DESIGN:
STUDIO UMBILICAL



There is always something reassuring about issue # 2. It's a long way from posterity, but it's proof that issue # 1 was no fluke.

Our lives have altered in the last six months.

The studio changes garb like a theatre set - serving as a meeting room, design shop, guesthouse and prepress battlefield. We send out emails to strangers with newfound zeal. Every interesting new person is screened as possible contributor, or possible story. All travel is with a purpose. There is always a stack of Mindfields in the car boot, and a camera handy.

Other things have happened too.

We have worked on our layouts and design, streamlined sections of the magazine. The Mindfields website has moved to www.mindfields.in, and it now lets you subscribe online. But the happiest development is our growing list of contributors - accomplished, lateral thinking, articulate - in complete synchronicity with the intent of Mindfields.

There is some serious talent between these covers.

We will continue to potter about, bringing you interesting stories and ideas from the world over. Contributions of every sort - subscriptions, feedback, articles, photos, design - are welcome. Do mail us at editor@mindfields.in

Amruta Patil
Luke Haokip
June 2007,
New Delhi

▶▶ **LETTERS**

ALTERNATIVE SCHOOLS

I enjoyed reading through the issue, specially about the alternative schools; my wife and I have spent more than 20 yrs in residential schools .

I have lent the magazine to other people in the field of education; some of them are likely to approach you for subscription and also for contributing articles. I am sure the subsequent issues shall be better and better.

With best wishes,
Wg Cdr SM Shukla (Rtd)
Pune

WORK IN PROGRESS

I looked at mindfield rapidly... surely I like the idea. And it can become stronger. I will most certainly look forwarding to checking it out and again and will write to you.

With warm regards,
Shefalee Vasudev,
New Delhi

The magazine looks good. Feels a little rushed when I read it, I am sure as it is a work in progress it will only get better and better. My faith and more in you is intact.

The Very Best,
Liza Chowgule
Goa

IDEAS FROM THE GROUND

I spent the Sunday morning reading the first issue of Mindfields back to back. When I look back and try to put my experience in one phrase, it's this:

"It left me with a lot of good ideas and ideas not from the air but from the ground :)."

Also, my experience of reading Mindfields differed from that of reading most of other magazines in one significant way - "Equity in quality across all articles". It could be the limited number of articles or even the feeling that all articles are truly abt learning.

Don't let my compliments act as an expectation at a time when u guys are struggling to get out the next issue. Let it be an indication that readers like me are looking fwd to the next issue :).

All the best!
P Bajaj
Delhi

WANDERING MINDFIELDS

Congratulations. It should have taken awful lot of work to get this off the ground. Hardwork always pays! Keep up the good work. Am planning to gift a Mindfields subscription to 10 friends!

With the best wishes,
Duraiamy Balaguru
USA

I am wandering the mindfields.
Thank you for making a nomad out of me .

Sudeep Basu
USA

DISAGREE WITH PENGUINS AND ROBOTS

Thought i'd give me two pence even though it was not called for. Interesting direction and interests covered.

The uniform article disturbed me and i seriously do not agree with opinions expressed having worked in the fashion industry for many

years...and having seen adults being sucked into trends, guides and the overwhelming media hoopla around fashion. It is a mean ol devil and i would stand to protect kids from it for as long as i can.

Would like to see sometime in the future an article on judy blume. are there any indian children authors like her? Would be nice to know about other childrens authors who go head to head with conventional education texts/authority.

Best of luck,
Deepa Jayaraman
China

LIKE PARENT, LIKE CHILD

It was a delight to go through (Mindfields') contents which are refreshing and certainly in synch with (iDiscoveri's) philosophy and vision. Because of my association with (iDiscoveri) I can claim to have some understanding of the revolutionary initiatives that you have undertaken. Mindfields will prove yet another addition to these pioneering endeavors. I have requested my librarian to go ahead with subscription formalities.

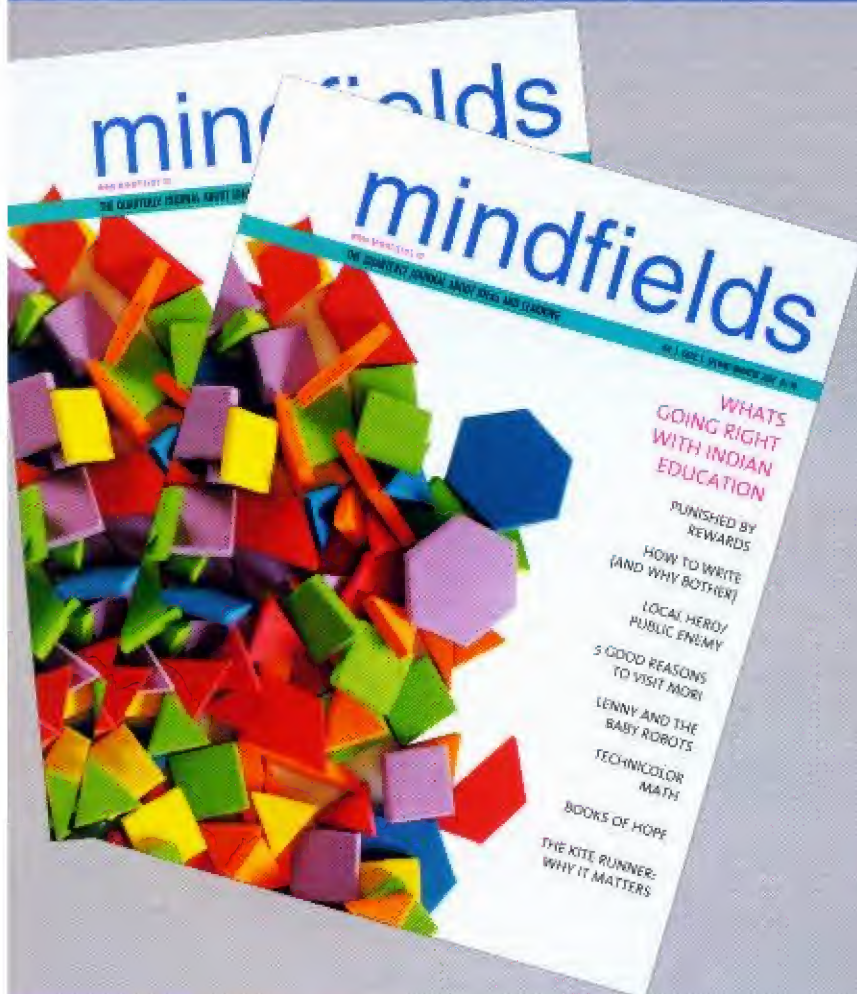
Ashok K. Pandey
Principal, AHLCON International
School, New Delhi

SMALL BEGINNING, BIG IDEA

Kaushik Ramu's article 'Breaking the Cast' was particularly moving. I look forward to more such articles. The quality of content is very good. Much better than a lot of glossy rubbish that is put out these days. Small beginning, big idea - all the best!

Srija Mathias
Kochi

SUBSCRIBE!



Mindfields aims at making the realm of learning accessible to everyone.

Every quarter, we bring you ideas and original writing from the world over, in a format that is as compelling as it is colourful and easy to understand. This issue is a preview of things to come.

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WORLDLY WISE

punished by rewards

Significant to remember, between a carrot and a stick - often stands a donkey.

What is the most popular way of motivating employees in the workforce? How do we encourage students to learn? How is good behaviour promoted in children? Through incentives and bonuses, through carrots of praise or the stick of rebuke, through good marks or bad, through rewards, and their counterpart, punishments. But is there anything wrong with that? Popular wisdom says that rewards work. So why not use them?

ADAPTED FROM ALFIE KOHN'S WORK BY SHWETA ANAND ARORA
ILLUSTRATIONS: AMRUTA PATIL

In his book, *Punished by Rewards*, Alfie Kohn builds a strong case against resorting to rewards. He argues that if our aim is to build a truly motivated workforce, students who are excited about and engaged in learning, and children who understand and practice the right values, rewards are not the route. Rewards do often increase the chances that we will do something, but at a cost, changing the reasons we do that particular thing, and our attitude towards it. Often, they can even kill the intrinsic motivation to engage in that particular thing, creating a permanent dependence on external rewards for performance. Kohn raises several questions about the effectiveness of rewards.

FOR WHOM ARE REWARDS EFFECTIVE?

A person's behaviour is easiest to control when the person is already dependent on you, and needy enough for the reward. Rewards are not as useful when the one getting the reward is independent-minded and doesn't value the reward.

FOR HOW LONG DO THEY WORK?

Rewards have an impact only in the short-term, and behaviour change lasts only as long as the rewards are being handed out. Over the long-term, they can often have negative effects. For example, in one study of fourth and fifth graders who were rewarded for playing with some math games, and not with some others, it was found that after the reward program was over, their interest in playing with the rewarded games dropped significantly, in many cases even below the interest of children who had never been rewarded! If we want to produce long-term interest, engagement and motivation, rewards might just be the worst route we can choose.

AT WHAT ARE REWARDS EFFECTIVE?

What rewards & punishment do is induce compliance in behaviour, not really produce lasting changes in attitude. So promising your child an incentive for cleaning up his room may work in the short-term, but won't really help him internalize the habit of always keeping it clean.

DO REWARDS ACTUALLY IMPROVE PERFORMANCE?

Kohn also questions popular wisdom that performance improves with rewards, at least in the short term. He reviews a lot of research that shows otherwise. For example, in a study by Janet Spence (1970, 1971), children were asked to remember which of two words were 'right' (arbitrarily chosen) and then choose these over others when they came up again. For some, a light was flashed when they chose correctly, and for others they were rewarded with candy. Those who were rewarded with candy got fewer right than the others.

Another researcher, Deci (1971), studied college students working on a newspaper who were learning how to write headlines according to prescribed rules. Over time, they got better and quicker. For some time, some students were paid for every headline they produced, and surprisingly, their improvement stopped. Other students continued to improve! The same effect was seen with preschoolers. Lepper et al (1973) found that preschoolers who were expecting a reward for drawing with felt pens made as many drawings as those who were not, but the quality of their drawings was much lower. In another similar study, fourth and fifth graders who were promised rewards formulated hypotheses less systematically and were slower to reach a solution on a problem-solv-

ing task. In fact, they even performed more poorly on an unrelated task a week later.

Further analysis and research proved that the effect of rewards is most detrimental when the task they are associated with is intrinsically interesting, and when the problem is an open-ended one in which the solution is not immediately obvious. Therefore, rewards are particularly unsuccessful in promoting qualities such as creativity.

One psychologist summarizing the research in this area concluded that people who are offered rewards tend to "choose easier tasks, are less efficient in using the information available to solve novel problems, and tend to be answer oriented and more illogical in their problem-solving strategies. They seem to work harder and produce more activity, but the activity is of a lower quality, contains more errors, and is more stereotyped and less creative than the work of comparable nonrewarded subjects working on the same problems." (CONDY, 1977)

WHAT'S PROBLEMATIC ABOUT REWARDS?

So why do rewards have such non-intuitive effects? Kohn analyzes the problems with rewards, and comes to the conclusions below:

► REWARDS DISCOURAGE RISK & CHALLENGE

Rewards set up an unequal relationship between the person giving out the rewards and the one getting them. When the latter is driven more by trying to impress the former, behaviour that involves taking risks naturally gets discouraged. Researchers have found that we are less likely to be innovative and creative when we are being rewarded for what we are doing, since we are just likely to repeat behaviour that has been rewarded in the past.

Several studies have found that children working for toys or grades and adults for money are less likely to choose challenging tasks. Seeking challenge, struggling to make sense of the world, and playing around with unfamiliar ideas are natural tendencies in a world unsullied by rewards (you only need to watch a child learning how to walk or trying to figure out how something works to believe that). It is a pity if we kill these tendencies by setting up systems that encourage completely opposite behaviour.

► REWARDS FOSTER (OFTEN UNHEALTHY) COMPETITION

Reward systems often set up competition or rivalry between people, and thus lie in the way of fostering trust and collaboration. For example, there is usually just one 'topper' in a class. This kind of competition can often hinder performance in several ways. It creates stress that often interferes with per-



forming at one's best. Also, those who feel they don't have a chance at topping don't even give their best, since the system has been set up as one in which you're working not to improve your own performance, but to outdo others.

► THEY ARE SUPERFICIAL SOLUTIONS

Rewards don't really go below the surface at all and get into reasons for someone's behaviour or performance. They're unlikely then to solve problems, since they stay at the symptomatic level, rather than getting to the root cause of things.

► THEY AFFECT INTRINSIC MOTIVATION

Finally, the most compelling argument against rewards is that they kill intrinsic motivation and interest in what one is doing.

For example, in one study, some subjects were paid to work on a puzzle and some were not. In the next phase, they were told to wait for some time in a room where they could have continued to play with the puzzle. Those who had been rewarded were less likely to continue playing.

Several other studies have confirmed that external rewards reduce intrinsic motivation. In a primary school classroom, a teacher introduced a reading-for-reward program. Children started reading a lot more books in school, but they chose shorter books, and were unable to answer even simple questions on what they had read. And their reading outside school reduced drastically. In fact, studies that have investigated long-term impact found that rewards once administered continue to undermine interest in the task even when participants are observed after a long gap.

One reason for these effects could be that when rewards are offered for doing something, it gets perceived as something undesirable. So when parents offer prizes to their children for studying and doing well in school, the signal they send is that studying is not intrinsically enjoyable or worthwhile. Also, rewards are frequently experienced as controlling, and we often recoil from situations where our autonomy is undermined.

SO WHAT INSTEAD?

Rewards, even when effective, have extremely limited applications in contexts where short-term compliance is sought. What can we do when we are looking for long-term effects such as a motivated workforce in an organization, engaged learners in a classroom, or children with positive values and skills at home?

Kohn suggests the 3C Approach – evaluating the content of what we're asking people to do, fostering collaboration, and

offering choice. He discusses how these can be meaningful alternatives to rewards in the contexts of motivating employees, teaching students and raising children.

► CONTENT

'When people at work do a poor job, it is necessary to look at what they are being asked to do – that is, the nature of the work.' Motivation is likely to be highest when people engage in work that is meaningful and gives them the sense of doing something worthwhile, when their job offers opportunities to learn new skills, and when they are able to engage in tasks that they find intrinsically interesting. Similarly, 'when students fail to learn, the first question to ask is what they are expected to learn and whether it is worth learning.'

What children are expected to learn in schools is mostly decontextualized and thus often appears irrelevant. To promote engagement, it is important to embed learning in a meaningful context, provide students the right level of challenge, and encourage children to actively participate in their learning by offering opportunities for constructing knowledge rather than simply receiving it passively.

'Likewise, when we are concerned that a child does not comply with a request, we must begin by considering the nature of that request.' Some requests made by parents are justified because they arise out of concern for the child's safety or well-being, while some others could be arbitrary or unnecessary. Most would fall somewhere in the middle. Good parenting is characterized by an openness to reconsider one's decisions, as opposed to always saying no and demanding unquestioning obedience.

► COLLABORATION

Fostering collaboration at work, particularly for tasks that require ingenuity and creative problem-solving, helps people perform much better and also stay excited about their work. Creating collaboration is not just about putting people into teams, but is also about creating conditions for individuals in these teams to truly collaborate.

In classrooms, research has demonstrated that cooperative learning helps children feel better about themselves, their peers and what they are learning. Students also perform better on several measures of how well they have learned.

Similarly, working with children at home, either explaining things to them, or helping them think through what is right or wrong, not only works better than reward and punishment, but also promotes children's intellectual and moral development.

► CHOICE



**CHILDREN LEARN
HOW TO MAKE
GOOD DECISIONS
BY PRACTICING
DECISION-MAKING
NOT BY FOLLOW-
ING DIRECTIONS.**

We are most likely to be excited about what we do at work and to do it well when we enjoy autonomy and have real choices about how we do our work. Being able to participate in decisions regarding organizational goals, and then being able to decide how to reach these goals are powerful contributors to better performance.

Likewise, allowing some amount of self-determination in classrooms would free teachers (and parents) from the task of constantly supervising and monitoring what children are doing, and enable them to give their attention to interacting with students meaningfully to really promote their learning. Innumerable studies have shown that such an approach actually leads to better results as well. One might argue that there is no space for choice in our board system.

However, one needs to only think a little creatively – preschoolers can be offered the choice to choose between working at different centres, each of which is set up to promote different skills such as pre-number, pre-reading or pre-writing skills. Middle school children can learn about ancient civilizations by choosing one and researching it in depth, and then sharing findings with the whole class and learning from each other. High school students can choose projects through which to demonstrate an understanding of advanced concepts in Physics.

Similarly, at home, if we want children to take responsibility for their own behaviour, we have to give them responsibility. Children learn how to make good decisions by practicing decision-making (and sometimes learning from mistakes), not by following directions.

Choice is important not just for promoting autonomy, but for promoting other virtues as well, such as generosity and caring. If prosocial values are taught in contexts where obedience is emphasized rather than autonomy, the learning is quite likely to be lost.

This declaration by Rudolf Hoss, the infamous controller of Auschwitz, provides an extreme demonstration of this fact: "he recalled being 'taught that my highest duty was to help those in need' but added that he learned this lesson in the context of the importance of 'obeying promptly the wishes and commands of my parents, teachers, and priests, and indeed of all adults... Whatever they said was always right.'" ■

ABOUT THE AUTHOR

SHWETA HAS A DEGREE IN PSYCHOLOGY, AN MBA FROM IIM AHMEDABAD AND AN ED.M. (LEARNING AND TEACHING) FROM HARVARD UNIVERSITY. SHE WISHES SHE COULD GO BACK TO SCHOOL, NOW THAT SCHOOLS ARE FINALLY BEGINNING TO GET INTERESTING! SHE LOVES LOOKING AT INTERIORS MAGAZINES, IS ADDICTED TO CHILDREN'S BOOKS, AND WISHES SHE'D MET ENID BLYTON.

YOU CAN WRITE TO SHWETA AT SHWETA@IDISCOVERI.COM



Milind Watve has released an audio cassette of Marathi folk songs, has published an award-winning series of wildlife encyclopedias, and written scores of popular science and original research articles on topics as diverse as bird cognition and microbial diversity. Somewhere in all this, he has also found time to teach and inspire a generation of young scientists.

INTERVIEW: MOHINISH SHUKLA
ADDITIONAL INPUT: ADISH DANI
ILLUSTRATION: AMRUTA PATIL

Maverick in the Microbiology Class

MS: SO, WHAT DO YOU TEACH? AND WHERE?

MW: Head of Microbiology at Abbasaheb Garware College, Pune. The most important class I teach is the first year of B.Sc. When students enter the B.Sc. program, they are without any direction. They have just survived the onslaught of 10th and 12th and they have not really thought much beyond that, and they don't even know what lies beyond. Many of them want to go for engineering or medicine somewhere, but they haven't gotten admission into those courses, so they get into a B.Sc course.

The first two months are very critical - in that period, if their interest is drawn into this field, their entire future career can build itself up. But if these two months don't go well, and if they don't develop an interest in the subject - then it's obvious that they won't do any better in the future. So, I spend a lot of time with the first year students. In the lab, in the classroom, taking them out on field trips, talking to them individually. And personally, I enjoy teaching the first year the most. I don't teach the second and third year much. One reason is the physical limitation of how much teaching a single person can handle. But the other reason is that latter years become very exam-oriented. Then, I teach the M.Sc. students.

MS: WHAT INSPIRED YOU TO TAKE UP THIS LINE OF WORK?

MW: Bad teachers [laughs]. I wasn't generally happy with the kind of education system I went through. And I wanted to be able to give others that which I myself did not get. There were a few good teachers though - especially in college.

MS: ANY THAT COME TO MIND?

MW: There was a head of the microbiology department who was not so great in the class - one would feel sleepy during his lectures - but the things that he told us were different. He used to tell us to just come and sit in the lab. That way, according to him, your attention will wander around the lab, you'll see people doing things there, maybe you'll even talk to them... *something* is bound to happen. Creating a love for the lab was something he did.

MS: OTHER TEACHERS SAY THAT YOUR WAY OF TEACHING IS DIFFERENT, NOT EXACTLY EXAM-ORIENTED, IN A SENSE. IN WHAT WAY DO YOU SEE THE DIFFERENCE, AND HOW DO YOU GET AROUND THE FACT THAT EVENTUALLY IT HAS TO BE EXAM-ORIENTED OR, WITHIN THE CONFINES OF THE INSTITUTION.

MW: The funny thing is that, even when I was a student, I never really thought much

about exams [*laughs*]! So, the fact that I don't do so now is a continuation of that. As a student, my take was that one should read what one is interested in. But, at least in those times, passing was not so difficult...

I feel that if students have understood the basics of the subject, then they also know how to prepare for exams, because they have spent twelve years in that culture. So I don't think they need to be told much how to prepare for exams - they know how to do it. And so if you teach them the basics of the subject, then they know what else needs to be referred to beyond that - generally enough to prepare them for exams.

MS: WHAT BUREAUCRATIC HURDLES YOU FACE? HOW DO YOU GET PAST THEM?

MW: More than bureaucracy, it is the orthodoxy of the system and the mindset of people that come in the way. I've tried to hold onto my independence from the start - whether as a young teacher, or a department head. For example, I always tried to conduct internal tests in a different way - have open-book exams, create different situations. Now, the crazy thing is that even this is no longer possible, because the structure of internal exams has been defined: so many multiple choice questions, so many definitions. Teachers have no independence even in the internal exams.

There are other problems with bureaucracy. In '98, when I became the head of the department, I tried to give it a new shape. This can never be achieved in a routine way. So, you have to go out of the way to do it - and, the management is not ready to go out of the way. They mean well, and they too would like to see developments underway, but in order to make these developments, you have to think outside the box. This is something they can't digest.

MS: HOW DO YOU FACE A CLASS EVERYDAY?

MW: In my first few years as a teacher, I used to really prepare. Plan the lectures, keep notes ready. I did that for the first couple of years. Then I stopped. The current situation is that I go absolutely unprepared. There *is* some flow - so I do remember what had happened the previous time - but very often, what is to be taught in class gets decided *after* going into the classroom!

We start talking at the beginning of every class. There is some quizzing, the discussion grows, (sometimes it can even happen that perhaps I *did* have something in mind to talk about, but we end up elsewhere). The direction of teaching slowly evolves in each class. Sometimes the students ask some question, and that determines the direction; sometimes I think of

IN CLASS, I DON'T LOOK AT THE WATCH. INSTEAD OF COUNTING TIME, I COUNT YAWNS! IF SOME DAY THERE IS A TOPIC THAT GETS THE YAWNING STARTED EARLY, THEN IT IS BETTER TO WIND UP QUICKLY, OR CHANGE THE TOPIC!

something rather different and the path changes! [*Grins*] It is open. The start and the end-points are determined, but the middle bits are not. That can go via any topsy-turvy path.

This hasn't really lead to problems - eventually, the curriculum has been covered, what has to be taught has been taught.

MS: YOUR CLASSES MUST BE QUITE LARGE; HOW DO YOU REMEMBER ALL THE PEOPLES' NAMES, AND WHAT IS YOUR WAY OF INTERACTING WITH THE STUDENTS?

MW: While teaching, my attention is mainly fixed on the faces of the students, and what kinds of responses they show: whether they are understanding something or not, appreciating it or not - *who* is showing signs of appreciation and who is not. Then, whether they are able to answer questions or not; if not why. Most of my mental energy is spent in watching these reactions of the students. I believe in face-reading more than anything else. You can gauge their caliber - who are the interested ones, who will go further, who has a large capacity to quickly grasp things, who takes a while to understand - these things come with practice (and it has been 27 years, now).

I take attendance for the first few months for a new batch, because it helps me to remember names. But I remember students' faces even if I forget names.

MS: WHAT DO YOU DO ABOUT DIFFICULT CONCEPTS; ONES THAT YOU FEEL THAT YOU ARE NOT ABLE TO GET ACROSS?

MW: In class, I don't look at the watch. Instead of counting time, I count yawns! [*laughs*] So, once we reach a certain number of yawns, that's enough! If some day there is a topic that gets the yawning started early, then it is better to wind up quickly, or change the topic.

On explaining something in a straightforward way, if it has not gotten across, then I just start over from a totally different angle. I start talking about a problem or situation that they are more familiar with. Once you understand a situation well, you also understand *why* you need the concept. And once you understand its relevance, you get interested in it and can understand it. So, the trick is to change the approach, and start from the other side. If you can't go from here to there, you try to go from there to here!

MS: WHAT ABOUT QUESTIONS OR CONCEPTS WHICH YOU YOURSELF ARE NOT FAMILIAR WITH, OR WHICH ARE OUTSIDE YOUR EXPERIENCE? HOW DO YOU REACT TO THOSE?

MW: Whether I know the answer or not, my approach does not change. The approach is not "I know the answer, come

I GUESS I AM MORE INTERESTED IN OFF-BEAT TALENT THAN ACADEMIC PERFORMANCE. THE ODD ONES OUT SEEM MORE DRAWN TO ME. AND IF I SEE OFF-BEAT TALENT, I FEEL IT IS MY DUTY TO NURTURE IT - BECAUSE THE SYSTEM DOES NOT SUPPORT SUCH PEOPLE.

to me!" It is more like, let us start thinking and trying to find an answer ourselves.

If I do know the answer, then I know where we are headed - but we all still travel towards it together. If I don't, then, along with everyone else, I am thinking about the problem too. Sometimes we unexpectedly come across some answers, and sometimes we don't, so we stop and acknowledge that we have reached the limit to our understanding.

But the important thing is to keep a question alive. Maybe not today, maybe in 25 years you will find the answer. Such things do happen. Some very old questions or observations suddenly come to your aid. Something will strike you, and you might find an interesting solution.

MS: HOW DO YOU KEEP IN TOUCH WITH ALL THE CURRENT HAPPENINGS; WITH BOTH THE PAST AND THE FUTURE OF YOUR RESEARCH?

MW: The situation now is that I don't have to take special pains to do this - I have so many students in so many fields in so many places... So, if there is some new development or an interesting new paper - I get a mail from someone, "Here is something new, have you read it?"

I also subscribe to some online news bulletins, like the evolutionary psychology group. If there is a new, interesting paper in *Nature* or *Science*, I ask someone to download the paper for me.

MS: NOW I'LL JUST CHANGE TRACK A BIT AND ASK YOU ABOUT YOUR FAMILY BACKGROUND: WHERE AND WITH WHOM DO YOU LIVE AND SO ON...

MW: [Grins]. Our family was not, in a sense, a typical family. My father was not very educated, while my mother was a doctor. Such was the combination. But my father had made a name for himself in his field, and my mother had too. So, I had the cultural influences of both in my mind, but my development was going in a different direction. I liked what they both did, and I was absorbing things from both of them, but ultimately I did neither of their careers.

While I was in college, my parents separated, and the next few years did not go well for me, emotionally. Only after I got married could I put this period behind me. One consequence of this middle period was that I was never too attached or absorbed in family, relatives - I remained a bit aloof from it all.

MS: YOU HAVE BEEN INTERESTED IN SPIRITUALITY OF LATE...

MW: Yes, but not "of late!" That was from where I was little. You know how when they are little, children want to be all kinds of things. One of the things I wanted to be was a train engine driver, and the other thing I wanted to be was a sadhu - and to travel all over India, on foot! [laughs] That was my childhood dream. And it remained intact till I was much older. Afterwards it turned out that I had some responsibilities, and going in that direction was not physically possible. But there was always that sadhu somewhere

in my mind, and he is still there.

MS: APART FROM TEACHING, WHAT ARE YOUR OTHER MAIN INTERESTS?

MW: I have jumped a lot from one thing to another. There was bird-watching, and travelling. I learnt classical music for a while - enough to be able to sing a *khayal* for 20-30 minutes. Writing Marathi poetry is something that has been most consistent. Then... illustrations, sketches, pencil-work.

For some years I pursued photography quite intensively. I also developed photomicrography with very basic equipment - it was part of my study, but it was a hobby as well. Using a students' microscope with an adapter, I'd mount the camera on that myself. For a while I didn't even have an adapter, so I used to just place the camera directly on the microscope. I tried many experiments with photography... inverting the lenses and so on - inverting a wide-angle to use as a macro and so on [laughs].

MS: WHAT DO YOU LOOK FOR IN STUDENTS?

MW: This is the most difficult question, perhaps. These impressions happen at such a subconscious level. I guess I am more interested in off-beat talent than academic performance. The odd ones out seem more drawn to me. And if I see off-beat talent, I feel it is my duty to nurture it - because the system does not support such people. So if you have to go out of the way to support them, I feel that it is my responsibility to make that extra effort. ■

WATVE'S FORUM FOR THE HOPELESSLY CURIOUS

What starts off as an argument, often leads to a flurry of new ideas. This is often seen in science where informal discussions and arguments trigger inquisitive pursuits.

More than a decade ago, Milind Watve initiated a unique discussion forum or 'katta' (in Marathi), where a group of people would get together in the evening to discuss and argue over questions, ideas and unexplained phenomena of the natural world. Participants at kattas have ranged from students to engineers and doctors, drawn by a common urge to ask questions about everything from molecules to elephants to philosophy. This tradition has been running uninterrupted in Pune for years, and has fired up the imagination of several young students, enabling them to identify their interests and follow successful (and satisfying) careers.

There were three kinds of discussions - 1) Where Watve clearly knew a lot about the theme and led the discussion. 2) Where a topic was pre-decided by consensus, a few seminal papers/articles related to that topic were distributed beforehand, and people were expected to read those prior to the critical discussions. 3) Where people brought up interesting topics over which nobody was an authority, and the discussion was allowed to flow in whatever course it took, with a little nudging from Watve (these interactions were sometimes baffling because no satisfactory outcome emerged, but in retrospect, that's ok).

Did the *katta* influence my own life? Totally. It exposed me to a world of ideas that were far beyond the scope of a standard syllabus. Ideas that I may or may not have been exposed to otherwise. •

ADISH (ANI)

PHD IN BIOLOGY, UNIVERSITY OF CALIFORNIA, BERKELEY
EX-GRADUATE OF WATVE'S KATTA



INTERACTIONS

THE NEW CULTURE OF HOSTILITY
IS BAD NEWS FOR MORE THAN
JUST BROWNIE AND TOMMY
DOWN THE ROAD. ANIMAL
RIGHTS ACTIVISTS YASMINE AND
JAYAPRAKASH TELL YOU WHY.

LOCAL HERO/ PUBLIC ENEMY

TEXT: YASMINE CLAIRE AND JAYAPRAKASH SATYAMURTHY
PHOTOS: LUKE HOOKIP; CUPA (BANGALORE)

The students at Vishwas Air Force School for the Differently Abled are not like other children. They have what educators call special needs – some are autistic, some are mentally retarded, others have varying degrees of mental and physical disabilities that make it hard for them to learn and develop at the same pace as most children of their age.

Take 7-year old Ankit. He is autistic, and his disability impairs his ability to socialize and emote like so-called normal people would. Despite his age, he has not yet spoken a single articulate word, although he does not have any speech impediment and is perfectly capable of learning language. The problem lies in the fact that he does not perceive or react to the world around him in quite the same way as you and I do – nothing has made him feel the need to speak, yet.

To try and help Ankit and the other children, the people at Vishwas employ a variety of special teaching methods. This morning, for instance a team of special therapists are to visit the children and interact with them in one of an ongoing series of such visits. These visits have helped the children learn to interact and empathise with living beings other than themselves, to open up and spontaneously share in friendship and play.

But the therapists are different, too. Their leader, Charlie, is a three-legged stray dog from a local animal shelter. His cohorts are an assortment of brown, black, white and piebald dogs, all rehabilitated strays or abandoned pets from the shelter. Under the supervision of handlers and volunteers from the shelter, as well as with the presence of teachers and parents, the chil-



THE THERAPISTS ARE DIFFERENT, TOO. THEIR LEADER, CHARLIE, IS A THREE-LEGGED STRAY DOG FROM A LOCAL ANIMAL SHELTER. HIS COHORTS ARE AN ASSORTMENT OF BROWN, BLACK, WHITE AND PIEBALD DOGS, ALL REHABILITATED STRAYS OR ABANDONED PETS FROM THE SHELTER.

dren interact with these dogs, petting them, playing with them and forming a bond with them that, it is hoped, will reach into the lonely inner spaces of their minds and help them build bridges with a world that can often seem alien and confusing to the handicapped or differently abled.

Ankit has participated in these sessions before, and his favourite playmate is three-legged Charlie. As the dogs are brought in and the children come forward to greet them, Ankit, thrilled to meet his friend again, races towards him and cries out in greeting, 'Charlie!' His speech is followed by a sudden hush as the adults in the room realize the significance of what has just happened. His teachers, his parents and the others realize that a breakthrough has just been achieved. Some of them even have tears in their eyes. Ankit will never speak, react or behave just like a regular boy of his age – but the progress he has made today will help to ensure a richer emotional life and an improved ability to communicate.

Far away in Mandya, a stray dog is caught, with his head twisted in a noose he is dashed against the ground repeatedly till he dies. Another stray, runs up to the dog catcher, wagging his tail, unsuspectingly, because the catcher calls him enticingly. The dog is then taken and his head stuck to the crook of a tree, where he wriggles, his tail still wagging, perhaps imagining this is some sort of a game. He is then injected with cyanide, and after struggling a little more to break free from the tree, he also dies.

These incidents are examples of methods used by the local city corporations to tackle the stray dog population. In Bangalore after two

children were killed in stray dog attacks the governments hired dog catchers and killers from Malabar to rid the city of stray dogs, squashing the existing WHO recommended animal birth control program (ABC)(see box) . What followed was horrific. Dogs in thousands were killed in a manner that violated every ethical and scientific code. There was a complete disregard for animal welfare laws laid down by the Indian constitution. (see box)

Unfortunately what the government did not take into account was that the deaths of these two children were in areas that did not come under the ABC program and lacked even basic civic infrastructure. With families living next to garbage heaps, illegal meat stalls dumping their waste on the roadside, and unsterilised dogs eating from such dumps, these were tragedies entirely of human making.

How do we reconcile these two images? How do we make sense of the fact that the same animals that have long been called our best friends can also be characterized as 'man-eaters' and 'ticking time bombs' by sections of the media, the political class and the general citizenry, who call for their summary eradication, or expulsion from our cities? Dogs have been living in a symbiotic harmony with human beings long before the first cities were ever built – what has happened to break this bond, or has it really been broken? And when our most loyal companions are now increasingly seen in the light of dangers to life and safety, what of our relationship with all the other creatures, large and tiny, that we share our spaces with?

Perhaps the answer lies in agency – in our agency, as a species, to shape, mould and change our environment to an extent that no other living creature can match. There are places in our cities where everything you see around you, all the way to the horizon, is man-made – except the sky above and perhaps a scrap of unpaved soil below. We've created a new order built around our own needs that have helped us to achieve a degree of stability and advancement as a dominant species that even the dinosaurs never



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achieved. In the process of expanding our own habitat, however, there have been casualties in the animal, plant and insect world – a toll that is only growing.

By monopolizing all available resources of food and space, we have created a reality underscored by constant, intense competition. This competition takes place within our own species, that's what we call war. It also takes place between species – and, for the foreseeable future, we are firmly positioned on the winning side. And we aren't especially foresightful or compassionate when it comes to getting what we want.

Ecologists talk about the rapidly dwindling rainforests of the Amazon basin, while others point to the fact that animal species are dwindling at a rate wherein 30 to 40% of current species will vanish within a century. But we needn't look that far afield for examples of our impact on the world around us. If you live in a large, crowded city, when's the last time you saw a sparrow? Once ever-present, these small, gentle creatures have been driven out of the city by the felling of the trees that provided their homes.

On the other hand, it's possible that you've seen a tribe of monkeys passing through your city sometime in the past few years. Dislocated by the destruction of their forest homes for urbanization, they wander through

our concrete jungles searching for food and shelter. Many die of starvation and illness; others are electrocuted by high tension wires or run over by high speed commuters. People complain about them – they are dirty, they have diseases, they steal food and threaten children. All this may be true, but it is a direct consequence of our own actions.

Speciesism and vilification of animals is seen and felt more strongly these days than before. Perhaps this is because of a lack of information combined with being influenced by what appears to be a majority view. The media, always lazy in their quest for an attention-seeking headline, coin bromides like 'stray dog menace', 'monkey menace', 'elephant menace', even 'tree menace' (when trees fall in rainstorms) when reporting on human - nature conflict. Words, phraseology, a subtly or blatantly sensational headline and public opinion can be swayed towards hysteria.

The consequences of hysteria are knee jerk measures that cause their own harm. Electrical fences and trenches have caused the death of numerous elephants and panthers in plantations. Plantation owners have been reported to leave a basket of fruits in which a country made bomb is hidden, killing curious animals in a painful, bloody way. Sambar deer, neelgai and the sloth bear are among the victims. The owners say that they are simply pro-

protecting their crops. What we disregard is the fact what is now plantation land was once dense forest, the home of these creatures. Even elephant corridors have not been spared and thus, many animals are literally refugees with nowhere to go.

It is argued that when so many humans are suffering, why give animals and their rights so much importance? If we create a hierarchy of entitlement that addresses only human suffering, who do we help first? Orphaned children? Battered women? Refugees from wars? Rape victims? The mentally damaged? The question is clearly absurd. There is room to address each form of injustice suffered by humanity. To do so is simple compassion, a universal human value that is also endorsed by the various faiths we claim to follow, secular or theistic. A society that provides for and protects both its people and animals can truly be called developed and compassionate.

If compassion doesn't seem like reason enough, there's more. Numerous studies have shown that cruelty to animals can be just a step away from crime on humans. Case studies of sociopaths and serial killers record that they have consistently abused animals in their childhood. If children are shown that it is alright to kick or throw stones at an animal, they will accept it as normal behaviour. Recently in Bangalore, teenage boys went out on dog-killing expeditions because they were being paid Rs.50 per dead dog. Perhaps some day they will grow up to show the same disregard for human life.

Meanwhile at Shristhi Special academy, Charlie works with a group of six autistic children. They know that Charlie travels a long way to come to their school, so they have taken the responsibility of boiling his milk, cooling it and then giving it to him to drink. He proudly wears an orange and blue bead chain that they have made for him and they insist that he looks at their homework before they give it in the next day.

For these children Charlie will always be a friend. For their parents and teachers, he is the bridge that connects the world of these children with theirs. As for Charlie, he loves the bond he shares with them, and looks forward to several hours of pampering he gets. It is as if these children have got a new life thanks to him. It is a new life for Charlie, too. Run over and left to die by the roadside, it took a long surgery and the loss of a leg to save him. Today, this three-legged survivor of human carelessness is helping human children lead fuller, happier lives. Kindness multiplies kindness.

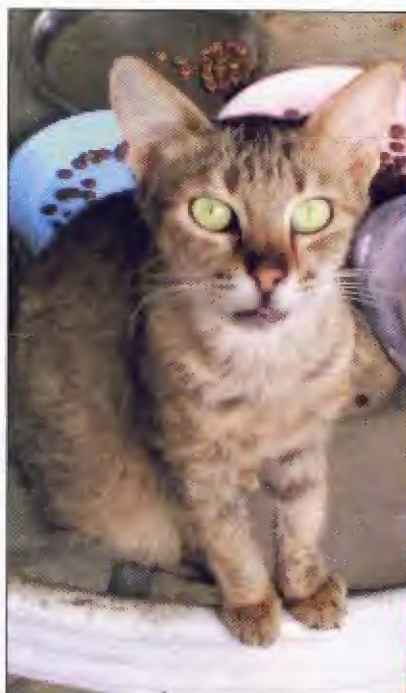
Children take naturally to animals. The special bond that children and animals share is seen everywhere. Disney movies, Children's literature, soft toys, even some psychological tests for children have been adapted to include animal themes because research has established that children respond better to such tests as they feel more relaxed and comfortable seeing pictures of animals.

There will always be conflict. Humans Conflict between humans, conflict with animals. It is the choices we make to address these conflicts that will determine our future. Will we make informed, compassionate choices, or will we react from fear and ignorance and create a cold, lonely world without the company of our animal friends? ■

ABOUT THE AUTHORS

JAYAPRAKASH SATYAMURTHY makes a living writing things most people never read, and hopes to make a living writing things everyone will want to read. You can read his passing thoughts at <http://jp-criminalenglish.blogspot.com>

YASMINE CLAIRE, teacher and amateur witch, works very hard to feed a very large army of cats. Someday she will write a sequel to TS Eliot's Old Possum's Book Of Practical Cats, or, if things don't go well, The Wasteland. Read about her cats, and other animals at <http://catsofbangalore.blogspot.com>



why mohini is as important as multi vitamins

Ask Yasmine Claire, and she'll tell you that Mohini (seen posing between socks, left) is more than a pet, she is actually beneficial to health. Science has proved Yasmine right.

PETS ARE MOOD ENHANCERS

Research supports the mood-enhancing benefits of pets. According to a press release, men with AIDS who had pets were only about 50 percent more likely to report symptoms of depression, as compared to men in the study who did not have AIDS.)

PETS CONTROL BLOOD PRESSURE

While ACE inhibiting drugs can generally reduce blood pressure, they aren't as effective on controlling spikes in blood pressure due to stress and tension. In a groups of hypertensive NY stockbrokers who had dogs or cats were found to have lower BP and heart rates than those who didn't.

PETS REDUCE STRESS - MAYBE MORE THAN PEOPLE

Recent research shows that, when conducting a task that's stressful, people actually experienced less stress when their pets were with them than when a supportive friend or even their spouse was present!

PETS ENCOURAGE YOU TO GET OUT AND EXERCISE

Whether we walk our dogs because they need it, or because we like to walk with company - the end result is that dog owners end up walking more than their non-pet owners counterparts in an urban setting.

All this, and they make for great lap warmers too! ■

CITY TO VILLAGE





BOOKS OF HOPE

THE MONKEYS SHE SEES EVERY EVENING ARE NOW PART OF MEENA'S OWN STORY BOOK. SHE, LIKE HER OTHER FRIENDS, ARE NOW WRITING, AND ILLUSTRATING, THEIR OWN STORIES. ARTIST AND EDUCATOR RIKKI ASHER BRINGS YOU A HEARTWARMING ACCOUNT OF HER TIME AT THE PARDADA PARDADI SCHOOL.

TEXT AND PHOTOGRAPHS: RIKKI ASHER

Inside the school building, a strong wind blows windows shut. It is about to rain and one can hear the sound of girls voices against the sounds of dishes being washed. The lights go out suddenly and there is a moment when everything stops. A few minutes later the lights come back on and classes resume. The wind is even stronger and doors slam shut. Hail begins to fall from a grey sky. Girls run down the hall covering their ears. Some will write about this hail storm and illustrate it for their book project.

Twenty fifth graders in green school uniforms, pale yellow aprons and sashes greeted me with , "Good morning Madam." I asked them to drop the *Madam* and call me Rikki or Ms. Asher. No luck. The classroom is up a narrow flight of stairs in the back of the building. There are no lights the morning we begin, no chairs or tables and the girls sit on the floor. I sit on the floor too and begin class. One of the school administrators is in the room to translate my English into Hindi and their Hindi into English.

The fifth and seventh graders I worked with had limited experiences with creative writing and fine art - though their vocational training does place considerable training in *aari* work, appliqué, shadow embroidery, and *zardozi*. The school has a retired art teacher, who emphasized teaching traditional motifs and patterns with colored pencils and markers on paper. My approach differed from their previous art classes in that I used their own experiences as part of the lesson.

As an initial motivational strategy I described what I noticed on the way to class. Having grown up in New York, one of the first things I noticed here was a blue peacock on the road. I asked the group to share what they noticed. Part of the description had to include something seen on the way to school, a color, and a place. This approach was so



PAINTING WITH POSTER COLOURS FOR THE FIRST TIME

new for the girls that at first they were at a loss for words. They looked at each other, and then slowly began to share. Since there was no blackboard, I listed what they said on a large piece of paper I taped on the wall. Brown monkeys, blue peacocks, yellow bananas, green sugar cane loaded onto the back of a bull cart, grey hail, red houses, and pink flowers were among the list. Class ended with questions. What did you learn today? And what would you like to know more about? The girls said that they all noticed different things even though they took the same road. This indicated that they had begun to view their natural surroundings with a new appreciation. They wanted to know what else we will be doing.

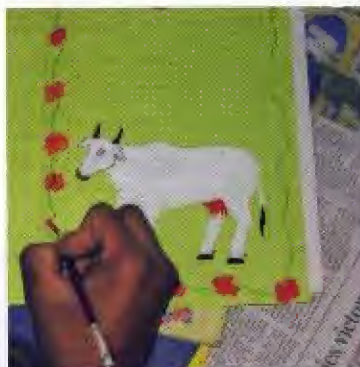
The 20 seventh graders were a bit quieter than the fifth graders. They worked better in pairs and spoke more openly. They noticed more daily life and were more people oriented. For example, they noticed blue buses with people going to Anupshahar, men in the back of a truck, girls riding and falling off bicycles.

When class ended I asked the same ques-

tions: What did you learn today? And what would you like to know more about? The girls said that it was the first time they were asked what they saw and their answers were part of the lesson.. This surprised and delighted them. Already on this first day, they became more were curious and began to ask me questions about why I came to India.

During the following days I divided the students into five groups of four. The reason for this was partly to foster classroom management and to encourage process oriented activities through cooperative learning. Small groups work well with new media and exploring ideas. The girls did memory drawings of what they described. They used colored pencils,

oil pastels and tempera paint. Having never used paints before they hesitated at first. I modeled three methods to handle this medium including wet on wet, dry brush and laying in areas of solid pigment. They practiced on scrap paper. At first the class was concerned about "messing up". Very quickly they began to feel comfortable in handling paint, and mixing color. In a few days most learned how to organize and develop a painted illustration as a total composition.





RIKKI ASHER AND STUDENTS



MACHINE STITCHING BOOKS



FINISHING TOUCHES



ENACTING THE TALE

After the illustrations were completed, I gave a lesson on storytelling. At first the girls asked, "Aren't you going to tell us what to write about?" At that point I began to tell a story about a peacock, and asked one girl to continue. She did, and after a few sentences I stopped her, and asked another girl to pick up where she left off, and so on, until the story was complete. With everyone involved it was clear that they all understood what to do next. The stories were based on the initial discussion about something they noticed.

Time constraints influenced the kind of books that were made. Origami books are simple to construct. A piece of paper is folded and cut to form a one signature book made without glue or staples. Each signature was hand sewn into cardboard folders for a soft cover. These pieces were machine-stitched with fabric around the sides.

Both groups created two sets of books that showed tangible evidence of the learning that occurred. Classes rehearsed for a presentation to fellow students and teachers. Fifth graders read books aloud to the audience. Seventh graders interpreted their stories through a dance performance. Both classes as a whole and individually fulfilled the project objectives successfully.

These girls took a short journey with me. Through drawing, painting, bookmaking, story telling and creative writing they

sharpened verbal and artistic skills, perception and memory. I gained their trust and enjoyed seeing their progress, total enthusiasm for art materials and their ability to express themselves so freely in such a short time.

A Queens College student is doing a similar project with her fifth graders in Long Island. We will exchange PPGVS books with books made by this Long Island group. In this way American students can learn about issues affecting girls in rural India and the Indian group will learn about American culture from students their own age. This project changed the girls ideas of art and learning in that they developed a feeling of ownership of their personal history. Although they live in economically poor communities, with many household responsibilities before and after school, they were open to one another, to the rich world of art and the imagination and moved to a new level of consciousness, of self worth and possibility. ■

ABOUT THE AUTHOR

RIKKI ASHER BEGAN MELTING CRAYONS ON A RADIATOR AT AGE FIVE. IS DIRECTOR OF ART EDUCATION AT QUEENS COLLEGE, AESTHETIC EDUCATION CONSULTANT, PAINTER AND PRINTMAKER. CAN BE FOUND STANDING ON HER HEAD AND THEN SITTING ON A CUSHION FACING A WALL FOR TWO HOURS, MOST MORNINGS. LOVES ANIMALS AND REFUSES TO EAT THEM. LIVES IN NEW YORK CITY WITH HER HUSBAND AND CAT.



PARDADA PARDADI SCHOOL BUILDING

The Pardada Pardadi School is located in Anupshahar, Bulandshahr district, Uttar Pradesh. Its mission is to uplift and empower girls from underprivileged backgrounds by providing them free education and vocational training. The voca-

tional school run by the society produces fine hand-embroidered linen appliqué work and block printing in the form of table clothes, bed covers, sheets, curtains and cushion covers. Proceeds go towards the welfare of women in Anupshahar.

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How to write and why bother

TEXT: GOURI DANGE

PHOTOGRAPHS AND JOURNALS: AMRUTA PATIL

Many of us grow up in homes and schools where original writing expected from us is restricted to templated 'essays' and 'compositions' on my vacation, my pet, and suchlike. A whole generation later, our kids are possibly doing the same thing. Some of them manage to enjoy themselves as best as they can within the template; others simply 'get it over with' when they have to write.

It is at this stage that we make unnecessary decisions and self-fulfilling prophecies about ourselves: 'I am no writer' or 'X writes so well, I could never do that.' If we've been fortunate to have teachers with imagination, she or he is able to not just pick and reward the best writing, but is able to pick up on potential, and/or flashes of good writing in an otherwise lifeless essay, and teach you how to take that streak further.

There is a novel in everyone – not to mention the short stories, poems, limericks, essays, haikus and a host of other genres that can emerge from anyone's life and observations. But unfortunately, there is also a terribly critical and rigid 'editor' inside most of us.

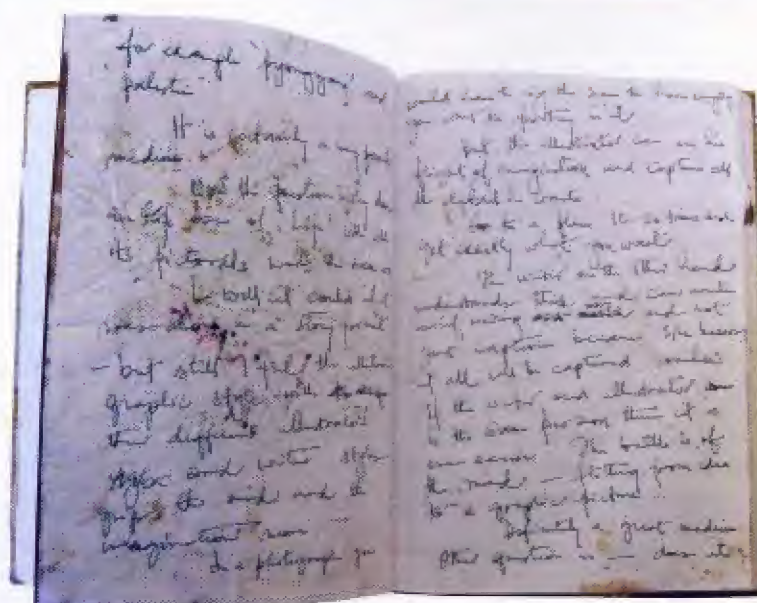
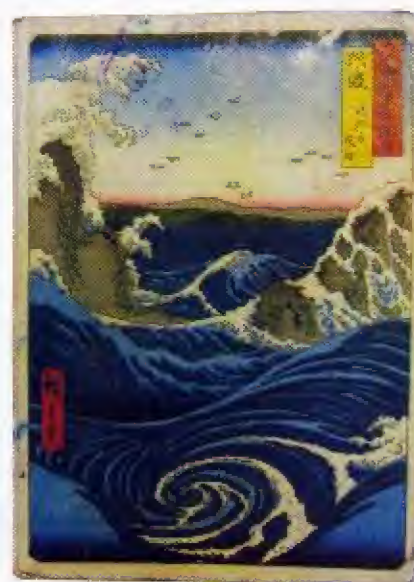
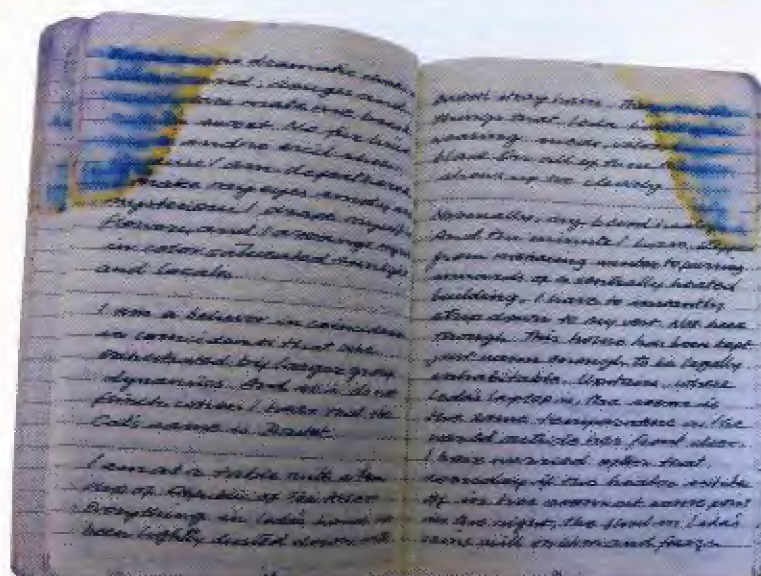
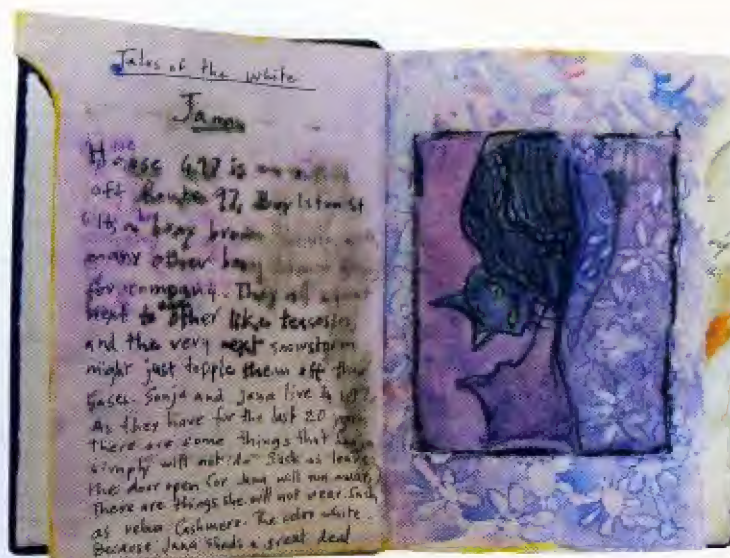
Far too quickly, before your writerly impulse can even begin to unfurl its wings, you tend to stand in your own way with

a fat blue pencil, ready with labels like: 'too childish, too personal, vocabulary is not good enough, others express themselves so much better'. On top of it there is, nowadays, a publisher and marketing person inside us too, active and rampant well before we begin writing: "Who will publish my stuff? Who will buy/read my writing?" this person asks us, and we put down our pens, snap off the computer, and go watch some TV instead.

Off and on, we have twinges of regret that we're not writing, a few flashes of inspired thought, some half-baked resolutions, and then it's back to the TV. For some of us, the twinges come up often enough to kind of gain critical mass and finally prompt us into writing something.

Two things could happen at this stage, both rather neurotic! Either you love and adore every word that issues forth, and want to be instantly read and even published without a word being changed here and there; or you read your stuff, dislike and disown it intensely, and bury it without ceremony.

So how, then, do you nurture the writer in you, or in someone around you – child, partner, friend? Someone may well ask: why nurture the writer at all, if it is such a painful process, the fruits of which may not see the light of day, or



translate into mega dollar advances, or garner awards, contracts, book-signing sessions?

To answer that question, you have to first erase the 'other-oriented' view that so many of us have about writing. Well before we begin writing, we make mind-pictures of the 'other' (reader, fan, publisher, jury, fellow-writer) enjoying or disliking, rewarding or rejecting our writing. Get rid of these mind-pictures. Ironically, and circularly, the best way to erase them is to start writing!

Another answer to the question of why we should write is that writing is a superb way of 'framing' feelings and experiences - to savour them, understand them better, resolve them, and perhaps ultimately to share them.

Before even putting pen to paper, observe and absorb the world around you through your five senses and more. Empathize and feel connected to a range of happenings in and around yourself - good, bad, ugly, sublime, absurd...the entire gamut.

Start with scribbling down or making mental notes of what 'gets you going' - is it nature, your child, your past, someone's situation, your pet, food, music, perceptions, relationships, conversations, disasters, places...anything...identify when you most often have felt: 'ah I should write this down'. These are called 'Minerva moments' - made up of just one or two beats. When the whole world and its babble recedes, and there's just you, and a fleeting but absolute understanding, leached and bleached of all doubts and questions.

Once you've found a subject/area, your favourite theme, go through the exercise of 'clearing your throat' or 'net practice'. This is a kind of limbering up, a preparation. It involves writing down (not planning to write, or talking about doing it, but *actually* writing down!) random thoughts and feelings that are set off on the subject. These are completely your own, subjective, first-off ideas and feelings. Don't look for a form/format at all at this stage, not even a decision about whether the piece is going to be fiction or non-fiction, in whose voice, what tense, and all those nitty-gritty choices that are for later. Remember to gently (or not so gently) shove out 'the other' that you may conjure up, reading over your shoulder. Don't discuss anything with anyone at this stage - it is an intensely private (some call it lonely) process right now, and keep it that way.

When you've freely scribbled these early core thoughts and feelings, you have before you rich raw material. It is pure,

powerful and potent, but in need of being worked on - distilled, or reshaped, fashioned, fleshed out, flavoured (choose/supply your own metaphor for the process here!) and ultimately transformed into something *which stands alone, in its own right*, without needing you to provide foot-notes (like: "this is what I felt on my first day of school"; or "this is about how mothers can push our buttons"; or "this is a conversation between two people I overheard who I thought were breaking up but so strange you know the guy was actually proposing".)

So how do you go about transforming, synthesizing this core material into 'writing'? Firstly, leave the core material alone for a few hours/days (not more, because then it gets frozen solid; all the charge kind of leaks out of it). Re-read it, and see if a format suggests itself. Best not to straight jump to the conclusion that it is novel/saga material. Look at small formats - the essay, the short story, a poem, a conversation. Play around with genres if you like. It is terrific fun.

For instance, in a writing workshop, I once wrote a longish, first-person, detailed, loving description of discovering that

a tiny bird had made a nest in my garden. And then, just-for-fun, I tried my hand at turning the long piece into a haiku - the entire experience condensed and universalized into a few syllables that brought out the engaging contrasts:

*Fiery, thorny bougainvillaea
Keeping Warbler's soft secret- a nest*

This is when you begin to really enjoy your writing, taking out your ideas-palette, selecting the right word-colours and choosing the right genre-brush.

The next important stage is to find ways to go beyond the autobiographical. Writers are asked so often: that poem/short story/novel you wrote... is it autobiographical? The honest answer to that is always yes-and-no. Because everything you have written - even if it is about someone else's life, or a

fictional character doing and saying and thinking things that are not necessarily what you as a person have lived - is stuff that you have absorbed, and has then emerged from the writer-prism of your mind, refracted and re-cast.

For this to happen, your imagination needs to be given full rein. You simply have to let your character and events run along any which way, while you are thinking up what happens next. Even if you are inspired to write by an incident from your own life; or perhaps an intriguing fragment of someone's life is lodged in your mind, and you want to grow it into a full-blown story, you'll be pleasantly surprised how it takes on a life of its own, if you 'allow' extra writing



THERE IS A NOVEL IN EVERYONE - NOT TO MENTION THE SHORT STORIES, POEMS, LIMERICKS, ESSAYS, HAIKUS AND A HOST OF OTHER GENRES THAT CAN EMERGE FROM ANYONE'S LIFE AND OBSERVATIONS. BUT UNFORTUNATELY, THERE IS ALSO A TERRIBLY CRITICAL AND RIGID 'EDITOR' INSIDE MOST OF US.

to happen around it. Magically, you will find that other stray fragments that you have in mind come right out and work their way into the character/story that you are writing. Don't, don't edit out stuff at this stage.

Avoid being 'efficient', and wanting to deliver just the right amount of clay to the right parts so that you get a stunning piece of sculpture straightaway. Let your story swell, even get flabby, stump along...you can work on that later, at the next stage.

This next stage - time to review, rewrite, tweak, fine-tune - comes only when you are all written out, 'delivered' of the incident, idea, feeling or character that has been waiting to be written about inside of you. At this reviewing stage, you need to find that fine balance between being ruthless with cutting out the flab, and yet not falling into the trap of being so exacting that you end up with a malnourished, anorexic narrative or character. Much as the first-rush of unpremeditated writing has its own worth, you'll be surprised how much it can benefit from a re-read - embellishments, cuts, facets, nuances, a changed word here and there, entire new angles...all sorts of things can come up and take your piece forward at this stage.

One last thing: many of us imagine that being able to write can happen only if we are assured what we imagine is 'the writerly life': being left alone to ideate; not having salesmen, bill collectors or the wolf at your door; never having your thought-process hijacked by the mundane/absurd demands of life. In two words: 'won't happen'. Or at least: 'not likely'.

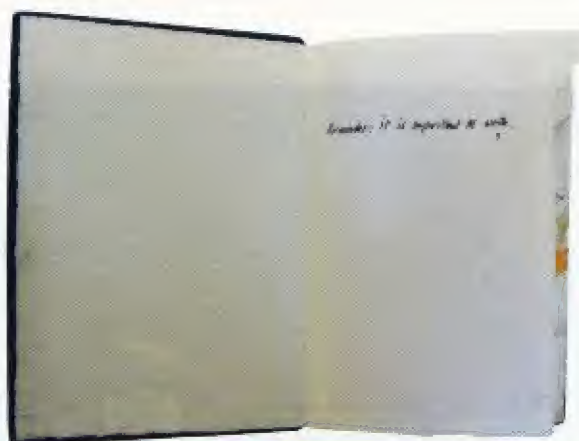
And even if you did manage to cajole, bully, wrest this kind of calm-time in which to write, there is no guarantee that you will use it fruitfully at all. It is not unknown for some of us to use such time gifted to us to get intimate with that bag of chips and the TV remote.

So the best thing is to try to develop a parallel universe of thoughts and feelings that runs along with your daily life, and to write something from that universe everyday. Virtually every well-known as well as prolific writer has been householder, parent, jobholder (overworked, underpaid, unwell) and has written through it all. And this he or she has managed by saving mind-space for the writing process, and simply going ahead and writing whenever possible.

My wordcounter tells me that I have written more than I should for this piece. This means that I need to quickly find an elegant closing sentence. I'm working on it. ■

ABOUT THE AUTHOR

GOURI DANGE PEOPLE-WATCHES AND WRITES IN PUNE AND MUMBAI. IS CURRENTLY COWERING BEHIND THE FIRST DRAFT OF A NOVEL. HER BIG FIX IS INDIAN CLASSICAL MUSIC. PLAYS THE SITAR, BUT ONLY FOR HERSELF AND A HANDFUL OF TOLERANT FRIENDS. IN KEEPING WITH PUNERI TRADITION, SHE HAS A RUDE MESSAGE ON HER FRONT DOOR. IT SAYS - 'THE MORE PEOPLE I MEET, THE MORE I LIKE MY DOG.'



Zen and the Art of Actually Getting Some Writing Done

Never throw away anything you have written

Or anything that you have edited out of your writing. Put it away in some suitably named folder. You'll be surprised at how it will turn out to be useful one day. Much like the fabric scraps that a good seamstress never throws out, and one day turns into a brilliant patchwork quilt.

Keep a pen and paper handy at all times

If a dictaphone, palm top, etc works for you, then those too - at your bedside, in your car, in your pocket. When you have a germ of an idea, scribble down at least a couple of keywords, so that you can jog your memory later. We've all experienced how truly brilliant themes/thoughts simply evaporate by the time we actually sit down to flesh them out.

Feed and fuel your imagination

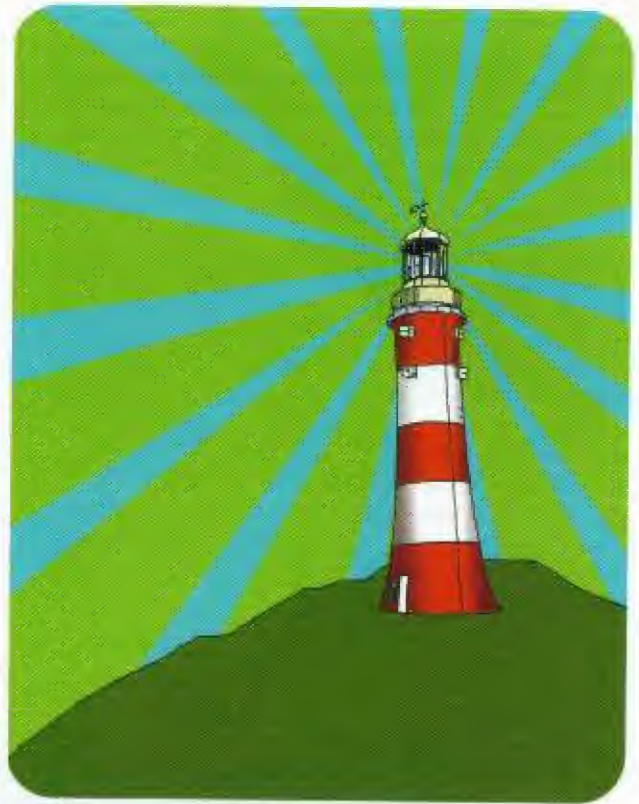
Listen to music, go watch a film, sketch, doodle, skim read, play a game, worry a sudoku puzzle, cook, meet friends, take the dog for a run. Being secluded while you're writing is not always a good idea. You will find sustenance and inspiration from the oddest, most unexpected sources. Serendipity, they call it.

Give yourself permission to write

The right to write. Too many of us place far too many embargoes, bans, fatwas on ourselves, refusing ourselves entry into some imaginary club to which we will never let ourselves qualify for membership. Start with giving yourself complete consent to write.

Obtain your first critics with discretion

The ones who will critique your material. If you do show your writing to someone, don't breathe down their necks for feedback. And when it does come, listen, really truly listen. Avoid the temptation of paying attention only to the good feedback.



4

LIGHTHOUSES ON THE HORIZON

WHAT'S GOING RIGHT WITH INDIAN EDUCATION TODAY

TEXT: ANUSTUP NAYAK, WITH INPUTS FROM TRISHA SEN, PARUL BAJAJ
ILLUSTRATIONS: LUKE HAOKIP

*The year is 2020. 13 years from now.
I see my nephew Zorawar standing tall on the stage singing a chorus with his friends. Hard to imagine that he is the same toddler who invented his own nursery rhyme at age three. He is showing me around his school. It doesn't look anything like the schools I went to - drab factory esque places where terrified children endured bored teachers. This place, in contrast, seems abuzz with enthusiasm and energy. And colour. For most Indian kids of Zorawar's generation, this is what a school looks like! It's amazing that the world can change so fast. I am envious of Zorawar and his peers!*

*Flashback. December 2006.
I pick up the latest issue of 'India Today'. The cover story is titled 'What's wrong with teaching' and is a scathing expose of the dysfunctionality of Indian schools. How our children are learning without understanding. How they know the contents of their textbook inside out, but are unable to explain why those things are the way they are. How hardly any of the 'knowledge' they acquire can be used in real life. It's a disturbing article - a long way off from Zorawar's school of 2020.*



FINDINGS OF A STUDY BY EDUCATION INITIATIVE AND WATIS IN TOP SCHOOLS ACROSS 5 INDIAN METROS:

- Students seem to be learning mechanically, and are able to answer questions based on recall or standard procedures quite well.
- Their performance on questions testing understanding or application is far below acceptable levels.
- The ability of the students to apply what they have learnt to new, unfamiliar problems - so important in today's world - is not very high.
- Students tend to slot learning into artificial compartments. They may learn something but are answer it only in the same context, in which the learning first occurred. They may be using an aspect of what they have learnt in their day-to-day lives but be completely unaware of that connection.
- Students tend to be weak in real-life competencies like practical measurements and problem solving.
- Across the sample of 11 questions in Maths and Science, the class 4 students performed *below the international average (43 countries) on all of them.*

Forces are being quietly unleashed to alter the future of our schools. Together, these forces are very potent because they challenge the root causes of decay, have tested breakthrough ideas on the ground and most importantly, taken them to a scale from where millions could potentially benefit. These forces are the lighthouses of hope for education in India.

LIGHTHOUSE 1: REINVENTING THE CLASSROOM



For decades, going to school was only about the three 'T's - text-books, telling and testing. While everyone recognized that learning had become a burden for most children, little was done.

After much inaction, the government has finally woke up to script one of the most comprehensive reforms in curriculum, teaching and assessment systems in the country. 'The National Curriculum Framework' (NCF) was proposed by NCERT. *(See box on the right).*

It provides the blueprint for a national system of education that puts the child at the center and not the other way around. It envisions a schooling experience that is connected to the real world, learning is not by rote or limited to textbooks, examinations are flexible and integrated into day-to-day teaching and children are nurtured to be creative and caring citizens.

Why should we take NCF 2006 seriously when many such well-meaning centralized policies have failed us in the past?

■ It honestly acknowledges the current reality and makes a case for radical change, "I hope this effort might start a freedom movement for the education of our young - away from some of the tyrannies in which we have enveloped ourselves", acknowledges Prof. Yashpal in a tone uncharacteristic of the government.

■ It gives practical suggestions for how textbooks, examina-

NATIONAL CURRICULUM FRAMEWORK 2005

In 2005 I had the privilege of serving on the Syllabus Revision Committee for Social Sciences. This was part of a mammoth exercise undertaken by the NCERT - the National Curriculum Framework (NCF) 2005.

The beauty of the NCF is that it draws on ideas of not only university scholars but school teachers (both government and private), people working for NGO's, at the grass root level, and individuals working in the private sector, such as myself.

Contrary to common belief, the NCF is not a prescribed curriculum that is to be uniformly imposed on schools across India. It is a framework within which schools can choose and plan curricula for children and thus respond to the diversity that exists in India.

The aim of the NCF 2005 is to "lessen the burden" on the child which means a movement away from the existing content overload to more conceptual understanding.

The guiding principles of the NCF 2005 are to connect what is being taught in the classroom to life outside the school, ensure that learning is no longer by rote, prevent curriculum from being textbook-centric, make exams more flexible, and prepare caring and sensitive citizens.

The new NCERT syllabi and textbooks are now available for the schools and they reflect much of what has been touted by the NCF 2005.

I believe that due to this initiative, we will see more child friendly schools and I foresee teacher education institutes revamping their methodology for preparing teachers. •

FRESHIA SEN IS A MEMBER OF THE NATIONAL SYLLABUS REVISION COMMITTEE FOR SOCIAL SCIENCES, NCERT

tions and classrooms can be reorganized – see the following example of how children can better understand multiplication by relating it to real life. Some of these suggestions are already visible in new textbooks and examination reforms.

■ Most importantly, NCF acknowledges that a 'one-size-fits-all' will not work for children whose lives are so diverse in a country like ours. It leaves room for local bodies to customize their own content according to their context.

While NCF provides a useful blueprint, this alone is not enough to reconstruct the system. What is needed is real content and know-how that makes a visible impact in the learning for a large number of children. (See box below).

THE PRATHAM READ INDIA PROJECT

The results of Pratham Read India project are outstanding. Pratham, one of the largest NGOs in the country, had an audacious idea to get 80 million Indian children who cannot read to learn to do so in six weeks or less. Within just six months of starting this project in 2003, more than 150,000 students in seven states had demonstrated a significant difference in their reading ability, and a million more children were touched in subsequent years.

How did this magic happen? Traditionally children are taught to read by first introducing them to alphabets and then in a step-wise manner to the use of vowel signs and so on until they can read sentences and paragraphs. Pratham figured out that such 'rules of literacy' interfered with learning the 'game of reading' and reversed the process. Their technique introduced reading short paragraphs and stories from day one – to start the game.

Children stumble to make sense of what they see, guess the meaning of words and then are helped by adults who gently question the child, conduct interesting activities like 'say-anything write-anything'. When stuck, the child refers to easy-to-understand alphabet, sound and sentence cards that help them decipher what they are reading. Through repeatedly playing this 'game' children overcome the barrier to reading.

Pratham is not alone. There are many more efforts to re-invent the 'what' and 'how' of the classroom. Homi Bhabha Center for Science Education (an offshoot of the Tata Institute of Fundamental Research) creates extremely popular 'Small Science' books consisting entirely of practical activities. Guided by the teacher, children learn to observe, question, plan and implement activities, analyze and interpret data.

What children will learn in the schools of tomorrow is likely to be about deeply understanding the world around them and the test of this knowledge will be in the application of this knowledge in real life problems.

LIGHTHOUSE 2: THE TEACHERS OF TOMORROW



Ask anyone what has made the most significant difference in their learning, and the invariable response is "A great teacher".

The less heartening reality is that a large part of India's 2 million teachers enter the profession because they have no other career choice.

Most of them have inadequate, or substandard training. Almost all of them are poorly paid. Hardly the circumstances that make for a motivated person. Or an inspiring person.

Private and academia-led initiatives have recognised this, and are trying to break the impasse in teacher development. The challenge has two faces:

■ How will we get attract talented young people and train them to be professional educators?

■ What can be done to renew the motivation and skills of the millions of teachers who are already teaching in our schools?

The Bachelor in Elementary Education (B.El.Ed) program of the Delhi University is a brave effort to create a high quality preparatory program for teachers of young children. Since its inception in 1998, the B.El.Ed program has already graduated over 1000 teachers who are highly inspired to take on teaching, are deeply aware of the fundamentals of education and have solid grounding in innovative classroom practices. Students interact with scholars and practitioners, work in internships in real school settings and are taught a modern syllabus that includes latest research on teaching and learning. The B.El.Ed program along with many newer efforts are bringing fresh new blood into a domain that has till now been served by 3000 odd B.Ed colleges whose stale curriculum and methods had reduced pre-service teacher education to a rubber stamp.

As for rejuvenating the existing teaching force in schools, Wipro CEO Aziz Premji decided to take matters into his own hands by launching an initiative called Wipro Applying Thought in Schools (WATIS) (See box on next page)

Gen Next teachers will surely be of a different DNA - with an uncommon willingness to learn and innovate, and with the emotional skill to connect and collaborate with children and other adults in school.

THE LIGHTNING BOLT THAT IS WATIS

Wipro Applying Thought in Schools (WATIS) aims at (re)training teachers and school heads. It started the process by first creating a coalition of 20 partners - leading educational organizations that brought expertise in new teaching methodology and training, but with divergent ideologies and methods. Then WATIS created a funding program that subsidized schools to invest in training programs provided by this national network of WATIS partner organizations.

The training programs include content on making teaching more experiential, ways to enrich curriculum, personal growth and leadership skills. In a short span of five years, WATIS and its partners have affected thousands of teachers and school heads through their Teacher Empowerment Program (TEP) and Exercising Leadership in Schools (ELS). While the impact of these programs are beginning to be felt in schools, it has brought forth a latent need to invest continuously in the learning and well-being of teachers.

LIGHTHOUSE 3: DEFINING LEARNING THROUGH TECHNOLOGIES



It's interesting to sit back and look at the ways in which the information and communication technologies around us are redefining the learning.

Computers are helping schools to run better, teachers to teach better and students to learn better. Educational content in form of video and audio is making learning interesting and fun. Computer literacy is soon becoming a skill as essential as reading and writing.

The government, the industry and the non government sector are working hard to bridge the digital divide. The internet has thrown open a world of resources to enrich classrooms. It has made 'any time', 'any where' learning possible forcing teachers to adapt their teaching styles to the new learning styles. It has fostered community and collaborative learning. Certain software applications and educational technologies have strongly assisted the differently abled in their quest for learning.

Institutions like IGNOU, National Institute of Open Schooling, NCERT, IITs etc. are using the technology platform of television Gyan Darshan, radio Gyan Vani and satellite Edusat to take their educational programs to the

remotest locations of the country.

Print media through publications like Hindu's Young World and electronic media through channels like Discovery are emphasizing the joy of learning and the pleasure of knowing.

The plethora of technologies that facilitate learning today reminds one of the days when Doordarshan was the only television channel around. Prof. Yashpal's free flowing talk about science would remove the alienation that many would feel for science. Programs like 'Surabhi' and 'The World This Week' would showcase the country and the world in ways which would leave children wanting to know more. Then as now, technology continues to play a crucial role by bringing the learner to the centre-stage of the learning process.

The writing on the wall is clear. While technology might not be a great tool for direct learning, it is a brilliant facilitator and enabler of learning. It makes learning accessible and flexible challenging the rigidity of institution-based contact learning. When the haloed portals of an IIM Ahmedabad are unable to accommodate all those who wish to enter, an NIIT Imperia will intervene to serve the institution's quality capsules at the convenience of the learners. It's just a matter of time when a similar experiment in school education will make the barriers in learning there fall.

LIGHTHOUSE 4: ENTREPRENEURSHIP IN SCHOOLS



Report after report throws up shocking statistics about the quality of the government schooling system - teacher absenteeism, poor learning outcomes, disengaged children and dilapidated infrastructure.

- Close to 15% of school going children living below the poverty line and 50% of all urban children go to fee-paying private schools charging between Rs. 50 - 200 rupees a month.
- The growth rate of these schools is even more spectacular, private schools accounting for 40% to 90% of total growth in enrollment in various states. These statistics show that increasing number of poor parents are taking their children out of government schools and enrolling them in private schools.
- Studies have shown that these private schools far outperform government schools in terms of learning outcomes for children - at least 25% percentage points in mathematics and reading abilities after correcting for differences in student selectivity.
- Per student expenditure of many of these private schools

is far lower than what the government spends per pupil estimated between Rs. 2000-4000 per child per annum.

Why should these statistics matter to us? Because they give us clues as to how we may unlock the potential of the school system. The rapid growth and success of the private schools for the poor establishes the fact that when unnecessary regulations are withdrawn, entrepreneurs find innovative solutions to age-old problems.

While the government takes time to respond to critique, an unlikely group of private entrepreneurs is beginning to take charge of the future of our poorest children. James Tooley, a UK based academic and champion of private schooling in India, notes that this entrepreneurial spirit enables them to run better schools with little resources, profitably, with much greater accountability. By providing technical assistance (mainly academic and management support) this group can be unleashed to find grassroots level solutions which large agencies will be hard pressed to do.

Leaders at India's largest companies have realized the link between quality of education and the availability of talent to drive India's growing economy. And Corporate India is taking on an activist role in school education reform. Wipro, Infosys, Tata and the Bharti group (See box below) are investing in education projects with scale and determination that far exceeds corporate philanthropy. They support innovative projects, develop content, supplement government infrastructure - even set up their own schools.

A coalition is emerging between local school entrepreneurs, corporate philanthropists and innovate education solution providers. The results will most likely alter the face of school education as we know it.

BHARTI FOUNDATION

Supported by an initial endowment fund of Rs. 200 crores by the promoters of Bharti Enterprises and Associates, the Bharti Foundation has set itself the goals of improving the quality of primary education for disadvantaged children and to ensure education and training opportunities for youth to help them achieve their potential.

The Foundation is poised to set up around 1000 primary schools in the rural Punjab, MP, Rajasthan and Uttar Pradesh. The schools target regions where the reach of government schools is low. The land will be contributed by the village panchayat, the other costs like those of infrastructure, facilities and people will be borne by the foundation.

MILES TO GO BEFORE WE SLEEP

Yes, indeed, there is hope for our schools.

If we reinvent the know-how of the classroom, renew the profession of teaching, find meaningful use of technology in learning and unleash the potential of entrepreneurship – the world of tomorrow will be distinctly different.

However these forces will not align themselves on their own; some enabling conditions need to be met. Until these have been created we cannot go to sleep. And to create these, we all need to play our part.

- Middle class parents have to wake up from their apathetic stance and demand meaningful education from our schools. No reform in what and how children are taught is possible unless parents demand that their children become thinking and caring human beings above their performance in board marks.

- The Government has to step out of regulating the delivery of education. Artificial constraints on the training of teachers, supply of infrastructure for schools, setting up of independent accreditation systems have to be removed if innovations have to take root.

- Scientific research on 'what works' and peer-group of professionals should create measurement standards of quality in all aspects of education, replacing the regulatory bureaucracies of the government sector and the free-for-all marketplace of the unregulated private sector.

- The victory is in crossing the last mile – constantly asking the question 'are children better off as a result?' What is needed is a clear execution of teaching-learning systems that reach every child. Everything else is a distraction!

ABOUT THE AUTHORS

ANUSTUP NAYAK HOLDS A MASTERS DEGREE IN EDUCATION FROM HARVARD UNIVERSITY. ROMANCES IDEAS THAT BRIDGE DISCIPLINES. TRANSLATES SOME OF THEM INTO ACTION AT IDISCOVERI CENTER FOR EDUCATION AND ENTERPRISE WHERE HE TEACHES COURSES ON SCHOOL LEADERSHIP.

TRISHA SEN RECEIVED HER PHD IN EDUCATION FROM EMORY UNIVERSITY, USA. HAS TAUGHT EDUCATION AT UNDERGRAD AND POST GRAD LEVEL IN INDIA AND THE US. IS A CONSULTANT FOR WIPRO APPLYING THOUGHT IN SCHOOLS (WATIS).

PARUL BAJAJ WORKED AS A VERIFICATION ENGINEER IN THE MICRO-ELECTRONICS INDUSTRY, AND AS INTERN IN THE EDUCATION SECTOR. IS GOING BACK TO SCHOOL FOR AN MBA AT IIM(B).



BRINGING LEARNING HOME

math in technicolor

TEXT: THE MINDFIELDS TEAM
INPUTS FROM RACHNA CHAWLA, POOJA SUKHPAL
PHOTOGRAPHS: LUKE HOOKIP

MATH SHOULD BE COLOURFUL, HANDS ON AND FUN. HERE ARE SOME TEACHING LEARNING MATERIAL THAT CAN MAKE IT HAPPEN. AT HOME, AND IN SCHOOL.

TECHNICOLOR MATH AT HOME

► RANGOMETRY: RANGOLI, GEOMETRY, SYMMETRY

The colours of a summer day picnic are painstakingly arranged around the rug in the shape of a leopard. Foam pieces in bright orange, lavender, pistachio green, cobalt blue - all in different geometrical shapes. In another part of the room, a group of children, all third graders, have created elaborate tessellations.

You can hear a child ask for a blue hexagon here, an orange rhombus there. This is a party game, not Math class. But the children are on first name basis with the geometrical forms, and are well aware of which specific form has the right number of sides to fit perfectly into that gap in the picture.

The foam pieces are part of a set of Rangometry tiles produced by the maverick organisation Jodo Gyan. Rachna Chawla, 38 year old mother of two, has sworn by Rangometry and other Jodo Gyan material for a while now. "Its been three or four years since Kartik and Avni played with their first Rangometry tiles, and they still seem to love them. And they are so beautifully packaged - they make great birthday party return gifts."

Ask Chhavi Bhullar, 6 years, her favourite part about playing with Rangometry and she says, "If you wet the pieces a little, they stick onto the wall or glass! For one full day!"

The need to make Math hands-on and colourful became obvious to Usha Menon and EK Shaji, founders of Jodo Gyan - during their interactions with junior school groups.

"For example, the only kind of triangle children could comfortably identify' says Shaji, 'was an equilateral triangle. As soon as the form was isosceles or scalene - it drew blank looks. A square resting on one 'tip' was identified as 'diamond' - no one associated the shape with their mental image of a square (one resting on its base)."

The experiential side of Math - so essential to making it accessible and interesting in formative years - was missing. In shapes lie the possibility of patterns. Hidden in patterns is the world of geometry. Rangometry lets them find out.

RANGOMETRY ACTIVITIES TO INTRODUCE CHILDREN TO GEOMETRY

MAKING FAMILIAR SHAPES



WHAT SHAPES DO YOU NEED TO MAKE A BUTTERFLY? HOW MANY TRIANGLES CAN MAKE A FLOWER? THESE QUESTIONS INVARIABLY LEAD TO AN ACTIVITY OF COUNTING THE CORNERS OF THE SHAPES, AND DISCOVERING -

FOR EXAMPLE - THAT A HEXAGON HAS 6 CORNERS.

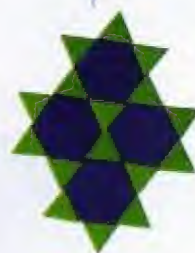
SHAPES OUT OF SHAPES

HOW CAN YOU MAKE A TRIANGLE OUT OUT OF HEXAGONS? HOW CAN YOU MAKE A LARGE SQUARE OUT OF MANY SQUARES? (THE LATTER ACTIVITY CAN HELP OLDER CHILDREN SEE A PATTERN AMONG NUMBERS - COUNT THE NUMBER OF SMALL SQUARES THAT IT NEEDS TO MAKE A PROPORTIONATE LARGE SQUARE).



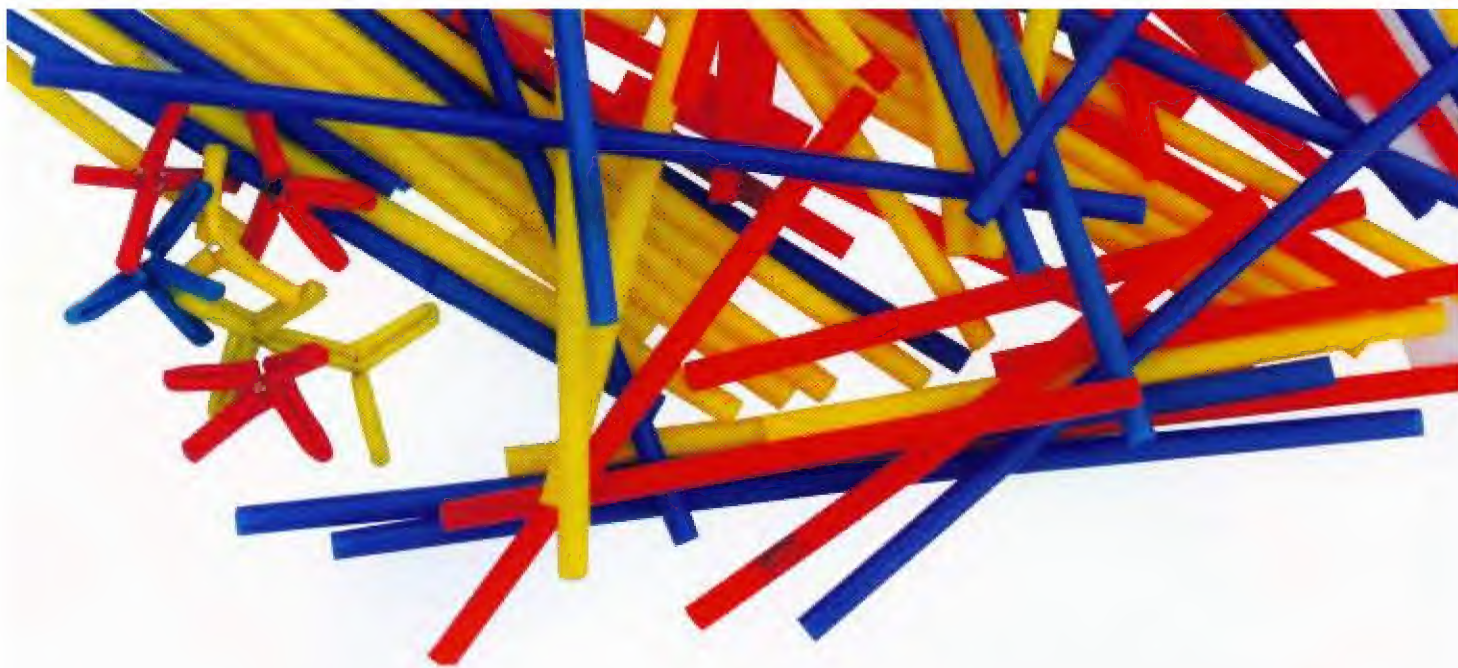
BEAUTIFUL TESSELLATIONS

CREATE REPEAT PATTERNS (RATHER LIKE THE DESIGNS ON ISLAMIC TILES!) USING THE FORMS. HOW MANY KINDS OF PATTERNS CAN YOU MAKE FROM THE SAME FORMS?



SHAPES AVAILABLE IN A RANGOMETRY SET:





▶ JODO STRAWS:

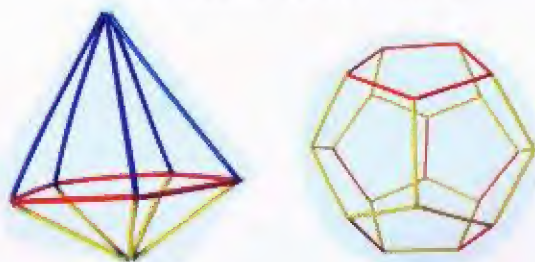
10 year old Harish Karandikar's toy rack spilloth over. Like most boys his age, he has a daunting array of battery operated gizmoid toys. A crate filled with yellow, red and blue straws cuts an innocuous profile on the shelf. It holds pride of place there. Last summer Harish and his two friends constructed a free standing, elaborate 5' wide, 3' tall, 4' deep 3 D superstructure for a space centre they designed.

Harish's sister Megha, 7 years, used the Jodo straws to make some elaborate polyhedras (though she doesn't know they are polyhedras) this Diwali. She covered them with kite paper and cellophane to make customized Akashkandils for the family home.

The Jodo Straw kit - like all other teaching-learning material (TLM) that Jodo Gyan creates - looks deceptively facile. The kit consists of connectors (those small, squiggly bits whose arm can be bent to take any direction in space) and straws of different lengths. The straws can be joined using the connectors.

What can you do with Jodo straws?

Learn about surfaces. Create models of chemical bonds. Build your way to understanding the elusive concept of the Z axis. From plain vanilla 3D structures like pyramids and cubes - to the outright exotic prisms, icosahedra, antiprisms, dodecahedra and stellated structures. The sky is the limit.



THE EQUIPPED ADULT

According to Shaji, "Experiential learning places an enormous responsibility on the adult who is facilitating it. We see because we are taught how to see. Unstructured experience cannot teach us everything." Which means that serendipity is great, but questions posed by children need very canny steering from the teacher/coach.

No matter how hands-on and experiential an activity may be, there isn't anything in the world that can make an interested adult dispensable. And this holds true at home as much as it does in school.

Story telling, too, has a significant role in adult-child interactions. Shaji likens education, especially at primary level, with theatre. "A good teacher does more than just create lesson plans - her classroom session are almost like a script", explains he. You have the people, you have the props, you have the plot - now what makes the play come alive is the liveliness of treatment. "All junior school teachers ought to have at least basic exposure to theatre and storytelling."

In keeping with this ideology, Usha Menon (the mastermind behind the design of Jodo Gyan material) ensures that there is written literature to go with all kits - suggestions of how stories may be woven into the experience.

So you aren't a natural born raconteur? Doesn't matter. "Math", sums up Shaji, "has its origins in human problems. You don't need to look far beyond your own experiences to make things interesting." ■

TECHNICOLOR MATH IN SCHOOL

► ROLL THE DICE, LEARN A CONCEPT

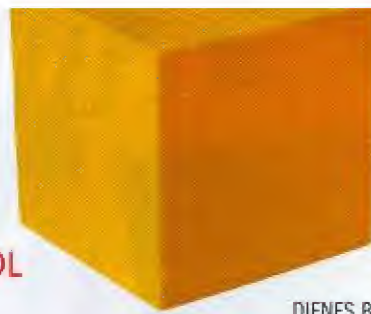
Admittedly, one of the most puzzling commands in class during my school days was "Work in a group." I could never see how four heads huddled together but working with fiercely competitive seclusion - could ever amount to 'group work'. The smart kids formed one tight huddle. The rest of the 'group' tried to peer over their elbows. That is precisely the sort of thing that teaching-learning material (TLM) like Jodo's card games (they have 2-3 different kinds) and 'Searching for Hundred' will *not* let you do. These are games designed for a group, and, surprise surprise - they are actually fun to play. Many times over.

So, the specialised dice in the card games need you to make a fast calculation here, a fast 'connection' with number patterns there - before you can move on to the next step. On the flip side of the draw cards are pictures of famous mathematicians that you will eventually notice. In 'Searching for Hundred', the journey of pretty Kasturi (who wears a red hibiscus in her hair) through the jungle is as poignant as the snake-infested board with its unfamiliar number placement, designed to sharpen numeral recognition and the understanding of number systems.

Curriculum developer Pooja Sukhpal recommends Jodo material for junior school Math Labs. The material, she feels, is durable and economical enough to be used even in schools that have a paucity of funds (The kits are priced at as low as Rs. 150). The Ganitmala (which helps develop a feel for the decimal system, and is a great way to teach math tables), Rangometry, and the Jodo Blocks are her personal favourites. "Other subjects fare a little better because of the interesting resources one gets to teach it with. There was, in comparison, a shortage of such resources for Mathematics," feels Pooja.

"Most of this material can be used in many different ways - depending on the resourcefulness of the teacher. It can really help make things lively in class, rather than having to rely on nothing but chalk and board," says Shaji. And how! ■

For information on Jodo Gyan teaching-learning material and availability, contact Shaji or Usha on (011) 2710 2820 or email: jodogyandel@gmail.com



DIENES BLOCKS



CARD GAMES

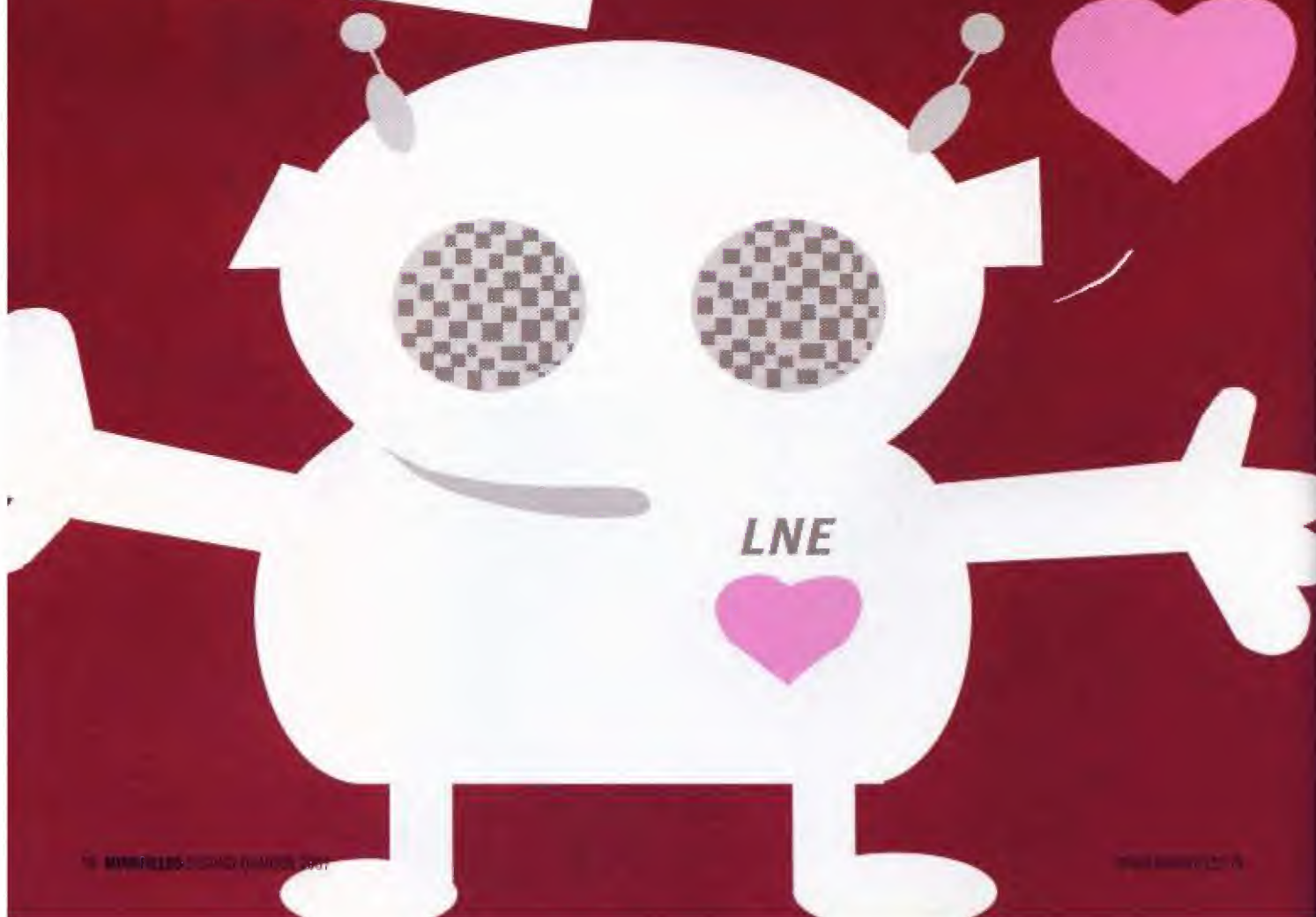


SEARCHING FOR HUNDRED



GANITMALA

DEMYSTIFYING SCIENCE



Lenny and the Baby Robots

TEXT: MOHINISH SHUKLA

ILLUSTRATION: AMRUTA PATIL

(based on a sketch of LNE by Mohinish Shukla)

The late Dr. Isaac Asimov, bless him, generously bequeathed to us a thrilling 21st century, peopled with many, many different robotic beings, mostly made at the US Robots and Mechanical Men, Inc. (US R&MM). As those familiar with the Asimovian universe know (too well), the robots created by US R&MM have fantastically sophisticated positronic brains that obey the 3 Laws of Robotics:

1. A robot may not injure a human being, or, through inaction, allow a human being to come to harm
2. A robot must obey orders given it by human beings except when such orders would conflict with the First Law; and
3. A robot must protect its own existence as long as such protection does not conflict with the First or Second Law.

One of the important personnel at the US R&MM is the formidable chief robopsychologist, Dr. Susan Calvin. A particular delight in the Susan Calvin stories lies in discovering the extent of the implications of the Three Laws and their interpretation. Sometimes, somehow, a robot causes some harm to a human being, and it is the job of Dr. Calvin to understand why.

In one such story, Susan Calvin finds that, due to an error, a prototype robot from the LNE series, intended for mining boron in the asteroid belt, turns out as a robot-baby. So, while earlier robots in the Asimovian universe stepped off the

assembly line ready for their assigned work, Lenny toddles on unsteady feet and knows little more than the Three Laws.

"Lenny" is, for me, a turning point in the journey from the robot as little more than a fancy calculator to a rational creature seeking entry into the human race (as in the sublime story, "The Bicentennial Man"). Lenny marks the coming of a more human robot; one who starts off ready to learn. Rather like a real human baby, Susan Calvin recognizes the immense potential of such a robot; instead of thinking of robots as highly specialized, fancy tools, one could begin to think of them as rational machines that would grow up in a similar way as human babies do.

But what is this "way"? Do we understand enough about human babies so that – when, sometime later this century, the US R&MM begins full-scale production of the babybots – they would know what to build?

We are much more familiar with human babies than with robot babies. And what strikes anyone who has spent any period of time with babies is that they seem to absorb information from the environment like sponges. How do they do this? And where do they start from?

More than a century ago, the American psychologist and philosopher William James imagined that when a baby was born, its perceptual world was "one great blooming, buzzing



WHY DO WE BELIEVE SO STRONGLY THAT THE OCCLUDED OBJECT REMAINS THERE? WHY DO WE NOT IMAGINE THAT IT HAS GONE INTO ANOTHER UNIVERSE?

confusion". From this chaotic mélange, the infant slowly comes to discern its mother's voice, its father's face, a warm bottle of milk and the telly. In this view, the mind of the baby is an empty slate, on which

experience writes down what the world is like.

For example, consider a property of the world around us: *object occlusion*.

It's quite plain to you that when a billiards ball disappears down a pocket, it doesn't *literally* disappear; it's still there, but hidden from view. Surprisingly, 2-month-old infants don't appear to have figured this out. (How, you might wonder, do we know what 2-month-olds have figured out or not?)

Researchers have found that, when 2-month-olds see a ball moving behind an occluder, they appear to treat each reappearance of the ball as a novel event. It is as if, for the baby, the display switches between two scenes, one containing a ball and one not. But, by 4 months of age, babies seem to know that it is a single display; one in which the ball is merely hidden from view temporarily, and they gaze expectantly at the occluder at the point where they think the ball will reappear. It is as if it takes four months for experience to write down on that blank slate: "objects that disappear behind other objects don't disappear from the world, but are merely hidden from sight".



Several such studies come to the same conclusion: very young infants don't seem to understand the general concept of objects-behind-objects. As another example, upon seeing an image of a triangle partially occluded by a bar, they seem not to be able to infer the presence of a complete triangle lying behind. Now, here is the funny thing: newborn *chicks* are perfectly able to make just such an inference! Of course, newborn chicks are able to do lots of things that human new-

borns cannot; for one, they can walk and run around.

But take a moment to reflect. Do we think that the ability to walk comes out of experience? Clearly not. It's not like the human newborn, upon encountering flattish surfaces, gravity, friction, two (semi-)controllable limbs extending below the waist and other similar-looking beings walking around, figures out *from scratch* that putting this limb so, and then the other one so (controlling for any number of external factors), it can walk. Instead, walking seems to follow its own developmental program, just like facial hair, zits, breasts and those curious feelings for members of a certain gender.

So, typically, you cannot walk when you are two months of age, and people around you would be very worried if you were *not* walking by the age of three.

And so, we come to a second theoretical stance, the *innateness hypothesis*, according to which, human babies are born knowing a great deal of things, and a great deal of other things come to be known in the process of maturation. So, in the innateness view, walking is built into our genes. Of course, you need *some* experience. Walking is a delicate balancing act, and like anyone who has tried balancing acts will testify, you need the careful adjustment of the weights and counterweights. Experience provides the data to adjust the system of weights and counterweights to make walking possible. And so, infants are rather like astronauts that get to the moon and need some time to readjust, just as astronauts need some experience to fix their moon-specific system of weights/counterweights.

So in the innateness view, we understand occlusion not because we learn about occlusion by observing the world around us, but because, in the course of its development, the baby brain grows little bits that encode the whole concept of occlusion. In fact, from a logical standpoint, how on *earth* would one ever learn about object occlusion from vision alone? An object can be (partially or completely) occluded, or not occluded. How do we know that the occluded object has not gone for a walk in the park? And notice, you can't say that you can just crawl around the occluder and check – as soon as you crawl around, the object is not occluded anymore, and the mystery of what happens to the occluded object remains unsolved.

Why do we believe so strongly that the occluded object remains there? Why do we not imagine that it has gone into another universe? The innateness hypothesis suggests that it is because this is the way we are built. After all, occlusion is an idea. It makes no sense to be able to actually *see* occlusion. It is an idea that is, fundamentally, inside our minds.

CLEARLY, THE BABYBOT IS PRE-PROGRAMMED TO LEARN. NOW THE QUESTION IS:
WHAT IS THE PRE-PROGRAMMING IN THE HUMAN BABY THAT CAUSES IT TO LEARN FROM ITS ENVIRONMENT?

So, from the viewpoint of the US R&MM, the babybot will need to have scores of in-built notions. We do not as yet have a complete list of what in-built notions exist in the human baby, and this is a hot area of current research. We know, for example, that babies seem to come equipped with the capacity of understanding a few small numbers, faces, the motion of biological objects (as opposed to cars) and that part of their acoustic input that corresponds to spoken language. We need to understand what the innately specified mental toolkit of the baby is, before we can endow the toolkit to the babybot.

Current technical advancements in the field of robotics and artificial intelligence are geared primarily towards understanding how to make a babybot that learns from its environment. In fact, a prototype babybot has already been built in the lab. But, here is a thought. Clearly, the babybot is *pre-programmed* to learn. Now the question is: what is the pre-programming in the human baby that causes it to learn from its

environment? In other words, is there yet another component of conceptual toolkit that is specialized for learning just about anything? Well, that is a whole other story.

What is a bit of a pity is that the human innate endowment, unlike that of Lenny the babybot, does not enforce the Three Laws, which, in the words of Dr. Susan Calvin, set robots apart from humans and make robots "...essentially decent". ■

ABOUT THE AUTHOR

MOHINISH SHUKLA STARTED OFF LOOKING AT MICROBES AND WRITING PROGRAMS. HAS SINCE BEEN INTERESTED IN HOW YEAST CELLS RESPOND TO STRESS, HOW RAT TESTES PACK DNA INTO SPERMS, HOW FORESTS ARE STRUCTURED, HOW WE HEAR FLUENT SPEECH AS A SERIES OF WORDS. LOVES COOKING, VIDEO GAMES, SCIENCE FICTION AND PG WODEHOUSE. READ HIS WRITING AT [HTTP://MOHINISH.BLOGSPOT.COM](http://MOHINISH.BLOGSPOT.COM)

Infant Days - a researcher's gaze

Infant research is, so to speak, past its infancy. The Society for Research in Child Development, for example, has thousands of member researchers across 50-odd nations. So, what do these men and women in lab-coats do? How do we understand what's on a 6-month-old's mind?

As with any scientific endeavor, the trick is in being able to reliably measure something. For example, imagine that the infant is in front of a display showing a sequence of different triangles, while the experimenter measures how long the infant is staring at the display. After a while, the infant gets tired of the display, and spends less time staring at it; the infant is said to *adapt* to the display. At this point, the experimenter throws a switch, and, instead of triangles, the display starts showing a sequence of squares. If the infant

notices that there has been a change, it will recover from the adaptation, and start staring at the display with renewed intensity.

In this example, the so-called *dependent measure* was how long the infant looked at the display. Over the years, researchers have devised scores of different dependent measures, like the frequency of foot-kicks, the rate and amplitude of sucking on a dummy pacifier, and changes in heart-rate and, more recently, changes in electrical and hemodynamic activity in the brain.

Such methods allow us to examine what do infants consider "same" or "different". For example, while adult Japanese speakers cannot reliably discriminate between the 'l' in 'lip' and the 'r' in 'rip', Japanese 6-month-olds can discriminate the two.

Such measures can also be used to measure a preference for certain stimuli. For example, newborns prefer to hear speech in their native language – they do not adapt as easily to native speech as compared to speech in a foreign language, and continue listening to it for a much longer period of time before being bored. Similarly, very young infants prefer upright to upside-down faces.

For further readings into the science behind understanding the cognitive capacities of infants, two accessible and fun, and yet scientifically rigorous books are *What Infants Know: The New Cognitive Science of Early Development* by Jacques Mehler and Emmanuel Dupoux, and *The Scientist in the Crib: What Early Learning Tells Us About the Mind* by Alison Gopnik, Andrew Meltzoff and Patricia Kuhl. ■



GET ACQUAINTED

NOTHING MORE DRAMATICALLY HIGHLIGHTED THE BOOM IN THE INDIAN ART MARKET THAN THE COUNTRY WIDE INCOME TAX RAIDS ON ART GALLERIES THIS APRIL. PAINTERS ARE THE NEW GLITTERATI - PARVENUS AND CONNOISSEURS SOLICIT THEIR ATTENTION, TABLOIDS TRACK THEIR OPENINGS, FILMSTARS AND FASHIONISTAS, INDUSTRIALISTS AND CORPORATIONS VIE TO BID FOR THEIR WORKS. INDIAN ART HAS ELICITED DIZZY BIDS AT INDIAN ART AUCTIONS.

THE ICING ON THE CAKE HAS BEEN THE LAUNCH OF TWO MULTI CRORE ART INVESTMENT FUNDS: ONE LAUNCHED BY GEETA MEHRA OF THE SAKSHI GALLERY; THE OTHER BY NEVILLE TULI OF THE OSIAN ART CONGLOMERATE. AND SHORTLY BANKS WILL BE ACCEPTING ART WORKS. AS COLLATERAL MESSAGE? INDIAN ART HAS ARRIVED.

DETAIL FROM MANJUNATH KAMATH'S 'IRONING KING'S CLOTH'

IN THIS ENTIRE MELEE WHERE IS THE SMALL TIME ART ENTHUSIAST WHO HAS THE PASSION BUT NOT THE DEEP POCKETS THAT SEEM TO BE A PRE REQUISITE IN CASE YOU WANT TO PICK UP ANY ART AT ALL? IS ART OUT OF BOUNDS FOR ALL BUT WEALTHY PATRONS AND FLUSHED-WITH-FUNDS-JOHNNY-COME-LATELY VARIETIES? VETERAN JOURNALIST AND ART CRITIC SUNIL MEHRA ASKS THE MILLION BUCK QUESTION:

IS BUYING ART THE PREROGATIVE OF MONEYBAGS AND OLD FATCATS?

Not really. I learnt this, to my everlasting benefit, from THE venerable Husain himself when I started out as a journo with a weekly news magazine and tremulously owned up to my nagging insecurity, my feeling of utter inadequacy in writing about HIM. "Write without fear but write with honesty" he assured me. "Trust your instinct. To appreciate art you need intuition. You need an eye. Not an art education. Buy what you like. Write what you feel."

That advise held one in good stead throughout one's journalistic career. One minor amendment I did make. I took care to educate myself. I realised that if I was to write anything anyone would respect I HAD to take the trouble to study and educate myself on the subject I was holding forth on. What one said after that was informed even if it wasn't absolute.

It is this combination of self education and intuition that helped one pick up good art on the cheap. I picked up my first Bawas in 1989 for the princely sum of Rs 20,000 paid in instalments over a whole year: two small works that are today priced at a mind boggling Rs 50 lakhs each. Was he the mega star he became then? Not quite. But I liked the work, the man and went with my instinct.



DETAIL FROM ANANDJIT RAY'S 'UNTITLED'

Likewise Bhupen Khakhar: good friend, wonderful soul and brilliant artist. Quite unable to afford his canvases I picked up sketches, random drawings for Rs 5/8/10/20,000 over the years. Over the years one realised one was sitting on a treasure trove of unusual drawings and sketches that revealed the innermost recesses, the subcutaneous of the artistic genius. Suffice to say those rare works are today worth an enormous amount of money.

There is a moral to this story lest I be misconstrued as the smug, pompous twit giving himself a pat on the back. You have to trust your gut instinct. Quite like my good friend Rajive Sethi who is wealthy enough to buy work from any of today's star painters. Yet, very recently he bought up an ENTIRE exhibition of a young, obscure Bengali painter called Tanmoy Samanta. His reason? He loved the wit, the skill, the intelligence of the artist. So he put his money where his mouth was and bought ALL of him off the wall. And did it pay off? Within the space of the last two years young Tanmoy has become a hot ticket: galleries are rushing to feature him, collectors are stampeding to buy him. And he is laughing all the way to the bank!

Examples are legion. Young Anandjit Ray was obscure in the late Eighties. Today he is a star with a long wait list of buyers and gallerists. Renu Modi, the intrepid owner of Gallery Espace discovered and launched young Rooshika Patel from Baroda. She once sold for Rs. 20,000. Today she sells for two lakhs plus. Ditto the

GALLERIES OF NOTE

DELHI

GALLERY ESPACE
16 Community Centre
New Friends Colony

VADEHRA GALLERY
D-178, Okhla Phase 1

VISUAL ART GALLERY
India Habitat Centre
Lodhi Road

ART HERITAGE GALLERY
Triveni Kala Sangam
Tansen Marg

MUMBAI

PUNDOLE ART GALLERY
Hutatma Chowk

GALLERY CHEMAULD
Kala Ghoda

SAKSHI
Shreeram Mills
GK Marg, Lower Parel

TAO GALLERY
Sarjan Plaza
Dr. A.B. Road

KOLKATA

CIMA GALLERY
Ashutosh Chowdhury
Avenue

CHITRAKOOT GALLERY
Gariahat Road

AKAAR PRAKAAR
Hindustan Park

BANGALORE

SAKSHI
The Presidency
St. Mark's Road

CHENNAI

APPARAO GALLERY
Wallace Garden,
Nungambakkam

PONDICHERRY

AURODHAN GALLERY
33 rue Francois Martin
Kuruchippam

quirky Manjunath Kamath whose fantastical magic realism canvases remind you at once of Rousseau and Marquez. Tomorrow's rising star? Mekhala Bahl who just showed at Alliance Francaise in Delhi. Her maiden exhibition has been a sell out. The bigger works sold for Rs 90,000 to 1,50,000. One predicts her rates will double in an year.

SO HOW SHOULD YOU BUY ART?

► GO FOR THE SMALLER WORK

Love an artist whose canvases seem too pricey? Enquire about smaller works or drawings. Much cheaper and often much more interesting. A friend picked up some fabulous sculpture and paintings walking through the student exhibits at the Baroda School of Art. Last month some expat friends picked up gems from the Delhi College of Art student exhibits. Last I went there some years ago Bhupen Khakhar was gleefully picking up paintings by the new-kids-on-the-block.

► TRUST THE UNDERDOG

Remember, today's strugglers are tomorrows stars. So put your chips on these dark horses and the derby might well be yours! Vishwanadhan, the Paris based star painter from Kerala was discovered the same way by a premier Paris museum. The rest, as they say, is history.

► WATCH THE RISING STARS

Pick up the larger works by the 'second rung' artists. Their time may come...and soon. Iranna is big today but he will be mega tomorrow. Shobha Broota's smaller works are easy on the eye and (hate to sound like an accountant here!) great value for money in the long run.

► GO WITH YOUR GUT INSTINCT

Ultimately all art is about love. Its your love for it that lends it enduring value. And that is something all art lovers/buyers would do well to keep in mind when buying art. If you can afford it and gives you joy go for it. Remember beauty lies in the eyes of the beholder. And profits in his pocket! But that should be incidental and not central to your decision. Believe me you won't go wrong. I didn't! ■

ABOUT THE AUTHOR

SUNIL MEHRA IS A JOURNALIST AND RACONTEUR PAR EXCELLENCE. HAS WORKED WITH INDIA TODAY AND OUTLOOK MAGAZINE. IS AN AVID READER, ART COLLECTOR, AND ANIMAL RIGHTS ACTIVIST. IS A GIFTED SINGER AND THEATRE ACTOR - A FACT THAT IS LITTLE KNOWN. DID NOT WRITE THIS BIO HIMSELF!

INDIAN ARTISTS WHO CAUSE A STIR IN INTERNATIONAL AUCTION HOUSES



DETAIL FROM F.N. SOUZA'S 'EROS KILLING THANOS'



DETAIL FROM MANJIT BAWA'S 'FLUTE PLAYER AND THE COWS'



DETAIL FROM BHUPEN KHAKHAR'S 'YAYATI'



DETAIL FROM AMRITA SHERGIL'S 'BRIDE'S TOILET'

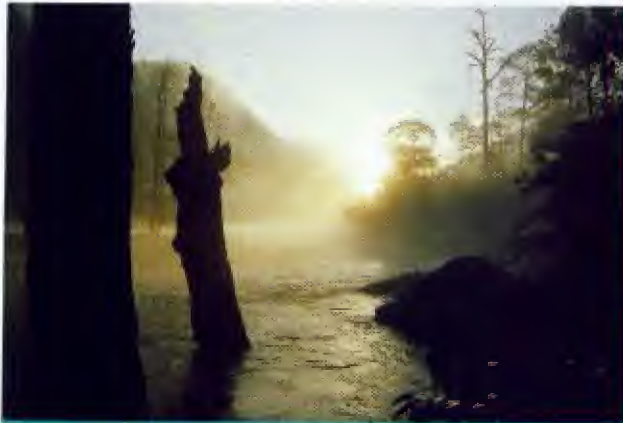
TRAVEL

5

good reasons to visit mori

TEXT: BHASKAR THYAGARAJAN
PHOTOGRAPHS: JAGAT RATHORE & GIO
LUKE HAOKIP, AJEY PATIL





SUNRISE OUTSIDE MY TENT

The entire valley is at an altitude range of between 1100 and 1600 or so meters. So it not exactly foot hills, but also not exactly the steep mountain - there is gently undulating landscape is throughout. In summer the days are balmy, but twilight hours can get nippy.

The valley itself feels incredibly quiet and untouched. Life seemed to move in slow motion. (Can't say the same of the river!) In many places, the pine forest sprawls right up to the river bank. The river beaches are small but very pretty and the mist in the mornings hanging over the trees and just over the river was in a

to relearn how to breathe

1



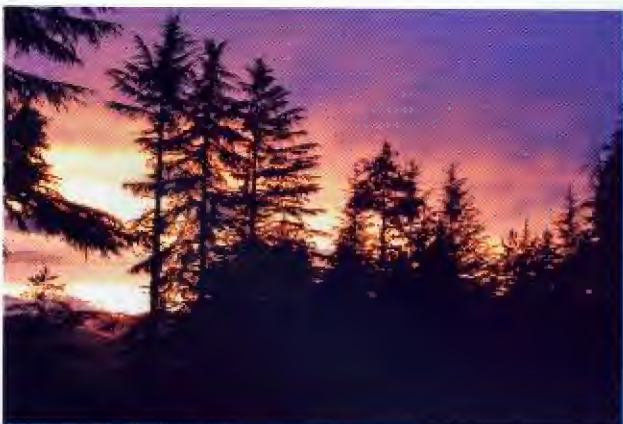
SUBLIME DETAILS



SURPRISES IN EVERY NOOK

manner I have never seen before.

A bevy of natural pools and waterfalls, with their pellucid waters are ever beckoning, surrounding high altitude *bugyals* (meadows) and a terrain that lends itself perfectly to vital activities - birdwatching (carry a pair of binoculars and Salim Ali's *The Book of Indian Birds*), sketching (Take along a small unruled journal and Staedler Lumograph pencils. Doesn't matter if you haven't sketched before in your life), collecting leaves for a herbarium (there is a profusion of herbs in the wild), or napping under the trees. ■



EVERY VILLAGE HAS ITS OWN MAHABHARATAN LEGEND

Uttarkashi has been referred to as *devlok* (abode of gods) in mytho history. The awe-inspiring landscape makes it easy to understand why. While there is an eclectic mix of Shaivite, Vaishnavite, Shakti and Buddhist worship, lore from the Mahabharata holds a special place. Every place has legends connected with it, and gods and goddesses are said to dwell on high mountain passes and ridges, waterfalls, snow-clad peaks, origin of rivers and streams, and their confluence!

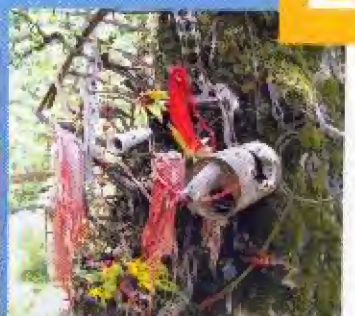
The Pandavas are said to have lived here during their exile from Hastinapur. (Lakhamandal, Gangotri,

to trail the Pandava heroes

2



SEEKING THE RIVER SOURCE

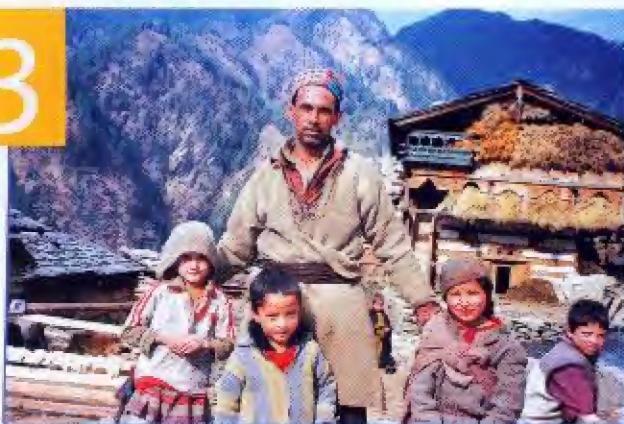


IRON OFFERINGS FOR SHIVA (SHAKRI)

Tapovan, Karanprayag and Pandukeshwar being some-locals will be happy to offer you their version of the story!) People who claim to be descendants of the snake-worshipping Naga tribe, mentioned in the Mahabharata, still reside in the interior valleys of Garhwal.

Performances based on the Mahabharata are staged at village *melas* here. And, interestingly, there are even temples devoted to the worship of Karn (Jaunsar-Bawar) and Duryodhan (upper valleys of Tons)! ■

3



FAMILY PORTRAIT

For a first timer, an introduction to mountain folk is always an eye opener - the frank curiosity and friendliness are hard to miss. In Uttarkashi (as in many parts of Uttaranchal and Himachal Pradesh), women share an equal if not higher status than men. (Polygamy, polyandry as well as a reverse dowry system may still prevail in parts of the region.) It's an agriculture-based economy here - not easy on a mountain terrain - and both, men and women are actively involved in all aspects of labour.

If you wander into someone's backyard, you may well be invited to chat or look at the house. Unique, the

to assimilate, interact



STONE AND WOOD, NO MORTAR



LOCAL SINGLE-CROP RAJMA BEANS

architecture of the region - with multi-storied and amazingly multi-functional wooden houses. The use of stone sans mortar is interesting as it is beautiful. How on earth do they fit the stones together so perfectly?

If you are lucky enough to get a home-cooked meal, try the delicious *hari sabzi* prepared from a nettle called *Bichechu Ghaas* or *Kundali*. (Don't try this at home!) Also look out for the locally grown single-crop *rajma* bean - all organic (the only fertilizer used is manure), the process not hastened by any artificial means. ■

4



THE FIRST OF A HUNDRED PHOTO OPS

No trip into the Himalayan foothills could be complete without some time spent on the trail. One of the high points is definitely pitching the tent and waking to mountain breezes billowing at your tent walls and immense panoramic views outside. The Har-ki-Dun Valley is also dominated by the Swargarohini Peak which was the supposed mountain scaled by the Pandavas enroute Heaven. Hence the name.

There are treks of varying distance and intensity. Here are some of my favourite trails - tried and true.

to trek amongst the clouds



OUR HOME FOR THE WEEK



A CONTEMPLATIVE FIRESIDE SESSION

- Trek to Har-ki-Dun and back to Mori (5 days)
- Trek to Sangla Valley through Rupin Pass (5 days)
- Trek to Kedar Kantha and back to Mori (4 days)
- Trek to Pushtara bugyals and back to Mori (2 days)

While you don't necessarily need to hit the gym and walk for hours to prepare for trekking in Uttarkashi, breaking into your walking shoes and walking 3-4 kms in the evening will keep your legs from going into rebellion in the open. Travel light - you aren't going to need too many changes of clothes. Don't skimp on the camera and paraphernalia. ■



THE TEMPESTUOUS FACE OF TONS

A highlight of one's trip to Mori is the rafting experience on the Tons River. The Tons (Tansa) is one of the largest tributaries of the Yamuna and it emanates from the glaciers of the Har-ki-dun Region.

The river has a continuous supply of good grade 3& 4 rapids. Apart from Rafting, the upper stretches of the river including its tributaries of Rupin and Supin are ideal for Kayaking.



WHITEWATER RAFTING PRIMER



THE CALM FACE OF TONS

The Tons river is roughly divided into three stretches. The first stretch (Just beyond Mori to Sandra) is ideal for people who have rafted a little before. The second (Sandra to Khunigad) is ideal for kids and the uninitiated and the third (Khunigad to Tiuni) has some real toughies best suited for the professionals, and usually carried out with expedition level planning.

Be sure to get your toes wet! ■

GETTING THERE, ETC



BY ROAD

Mori, the nerve centre of most activities around the Tons, is 410 kms from Delhi: a 10-11 drive. Three routes are:

- ▶ DELHI - BAGPAT - BARAUT - SHAMLI - SAHARANPUR - HERBERTPUR - VIKASNAGAR - YAMUNA BRIDGE - PUROLA - MORI
- ▶ DELHI - KURUKSHETRA - PIPLI - YAMUNA NAGAR - PANDTA SAHIB - HERBERTPUR VIKAS NAGAR - YAMUNA BRIDGE - PUROLA - MORI
- ▶ MEERUT - MUZAFFARNAGAR - ROORKEE - DEHRADUN-MUSSOORIE - PUROLA - MORI

BY AIR

The Jolly Grant Airport (Dehradun) is the nearest airport and is connected by daily flights from Delhi. The drive from the airport to Mori will take 5 - 6 hrs.

BY TRAIN

The nearest railhead to the camp is Dehradun 170 kms away. Dehradun is connected to all parts of the country. The prominent trains from Delhi to Dehradun are Mussoorie Express, Dehradun Shatabdi Express, Dehradun Janshatabdi Express & Dehradun Nizamuddin AC Special train. Its 4 hrs drive from the station to Mori.

Since Mori is off the beaten track, public transport and local accommodation is not abundant. Co ordinating with an adventure travel operator will ensure pick ups from the station or airport, as well as arrangements for stay, camping, treks, rafting etc. Some reputed organisations to contact:

- GREAT INDIAN OUTDOORS, WWW.GIO.IN
- AQUATERRA ADVENTURES, WWW.TREKNRAFT.COM
- HIMALAYAN RIVER RUNNERS, WWW.HRRINDIA.COM

BEST SEASON TO VISIT TONS

For trekking: Anytime except the rains (July - Sept)
For camping: Anytime except the rains (July - Sept)
For rafting: May and June


ABOUT THE AUTHOR

BHASKAR THYAGARAJAN IS A DIRECTOR WITH GREAT INDIAN OUTDOORS. READS ONLY WHEN HAS NO OTHER OPTION - HE PREFERS INTELLECTUAL STIMULATION THROUGH HUMAN INTERACTION. IS AN AVID TRAVELLER, AND LOVES HIS MUSIC PLENTY. HAILS FROM CHENNAI, BUT LIVES AND WORKS IN GURGAON BECAUSE IT'S THE MEANS TO A MORE SATISFYING END.



SURF'S UP!

DIAMOND HEAD BEACH



IN 'GREAT WIDE OPEN' WE INTRODUCE YOU TO MODERN-DAY NOMADS. PEOPLE WHOSE LIVES ARE INEXTRICABLE FROM THE OUTDOORS - MOUNTAINEERS, LONG-DISTANCE CYCLISTS, BACKPACKERS, NATURALISTS

TEXT AND PHOTOGRAPHS: APRIL LEE

THE FIRST AMONGST THESE IS THE EFFERVESCENT SURFER GIRL FROM HAWAII, APRIL, WHO WE MET IN NEW DELHI BETWEEN HER ARTISTS' RESIDENCY PROGRAMME AND A FREEWHEELING TRIP ACROSS TIBET!



APRIL WITH A SURFBOARD SHE DESIGNED

During the quarter century or so I've been prancing about this earth, much of my time has been spent in or near the ocean. I grew up a 10-minute walk from Oahu's infamous eastern shore beach, Sandy's. Sandy's is famous for its paralyzing shore-break. Indeed, I've known a few people accessorized by neck and back braces after bodysurfing this lovely monster. I credit this unique upbringing for the near complete comfort I find in the ocean today.

Some girlfriends and I decided to head down to the world renowned Waikiki Beach one summer, and take surf lessons from the 'Waikiki Beach Boys' who operated a little surf-lesson stand right on the beach. Today there are many such stands, offering tourists lessons on beginner friendly 12-foot sponge boards (safer material to learn on) at \$20 per hour. In 1992, when we were 12 years old, there was one stand, at less than half price, servicing us on old fiberglass clunkers. We had a blast! My 7th grade heart was hooked! The next spring, I chose a surfboard for my birthday, a used 6'2" Kerry Tokoro shortboard, with vibrant red, orange and neon yellow flames airbrushed on the deck. I chose a bright orange nose guard to affix to the tip of the board. Nose guards add psychological comfort as protection against the tip or 'nose' of the board piercing through one's flesh or even eye during a wipeout. Needless to say, I was stoked on my birthday board, even taking it to bed with me, enjoying little naps together.

By the time high school rolled around, both girls with whom I'd taken the surfing lessons with in 7th grade had become allergic to the water, one girl became a model, and the other disliked the sun's effect on her freckles. A new crew of athletic young women soon took their place, particularly Shelly O'Brien. Shelly grew up two streets up from me near Sandy's and was a fellow die-hard ocean enthusiast.

Lifers. We became partners in crime; surfing, cliff-jumping, snorkeling, skate boarding, creating general mischief, and usually passing out at sunset, only to rise and start it all over again. We would skateboard down to our ocean playground with either our boards if there were waves. If it was flat out we'd head down with masks and explore the reef, fish and turtles, and sometimes even scour the sea floor for any jewelry that might have been knocked off an unfortunate tourist.

During this golden period, Shelly and I explored many different beach breaks on the island as well, even venturing out to the treacherous North Shore beaches when we managed to catch a ride with our older brothers. Noteworthy was the fact that there were very few other girls surfing during this time. The only other 2 girls out at Sandy's, for instance, were Daize Shayne (world-champion long boarder) and Sanoe Lake (surfer and actress seen in the film *Blue Crush*).

This was also before the invention of girl specific surf attire, so we just wore our older brothers' hand-me-down board shorts or simply went out in bikinis. Roxy, the girl's version of the surf brand Quiksilver, arrived on the market when we were seniors in high school. Needless to say, Shelly and I turned our noses up at the little surf shorts with flowers and pastel colors, especially as they encouraged a whole new generation of "poser" surfer girls - basically more crowds to negotiate through at the line-up. We felt our credibility as surfers would suffer because of the new surfer-style fashion statements walking around our high school campus.

This "Roxy Girl" image is an interesting sociological case, however, as it eventually encouraged a younger generation of female surfers worldwide, and has helped balance the ratio of women to men surfing today. Contrary to Shelly and my original apprehension about these Roxy Girls, they really *can* surf. The brand sponsors female surfers, encouraging serious training and dedication to the sport. Some of the world's best surfers today are women, including Sophia Mulanovich, Kealla Kennelly, Lisa Anderson, Carissa Moore, and Layne Beachly - and many of them are or have been sponsored by Roxy in the past.





SURFING HOTSPOTS IN HAWAII

FOR THE NOVICE

Waikiki Beach
Diamond Head
Tonggs
Waiupe's
Ala Moana Beach Park

FOR THE SEASONED

Sandy Beach
Ala Moana Bowls
Makaha
Gas Chambers, North
Shore

FOR THE PRO

Anywhere on the North
Shore during the winter
including:
Pipeline
Waimea Bay
Sunset Beach
Haleiwa
Rocky Point

From 1998 - 2002 I attended Vassar College in New York. This was the one ocean-less period in my life. I traded in my fins and surf-wax for critical theory and boyfriends. After graduating with a studio art degree and the equivalent in art history, I headed to New York City - the last place on earth to re-discover surfing after my 4 year hiatus. I thought,

I worked in museums and galleries, continued making my own art work, busy living life New York style. After a few years of this, the ocean began calling my name, first in whispers, then in with trumpet blasts from the furthest corners of my soul. I quit my gallery job, and flew to Thailand where I spent a month on the beach. I befriended a crew of organic apple farming surfers upon my return to New York, and began my re-birth as a surfer.

Rich Rossmassler of Red Jacket Orchards, would pick me up at 5 am in a jeep full of surfboards, and we'd head out to Long beach, stop for a coffee-bathroom-morning hug at Candice's house, before zipping up our wetsuits and running into the cold, black, endlessly inviting water. Rudell from Barbados was the 4th regular member of the gang, which undulated in size with other friends hopping along (on those days they decided the beach was worth 5 am.)

For one magical year, the New York surf crew hit spots from Queens, to Long Island, to New Jersey. It was wonderful to meet fellow New Yorkers in the water, as opposed to on the concrete.

Attitudes were left behind, and a general feeling of pure stoke permeated the line-up. Thoughts such as "We're surfing - in New York - while everyone else is sitting at a desk stressed out or nursing a hangover or still passed out from the night before..."

I have now been back in my lovely surfer's-paradise home, Hawaii, for the past 2.5 years (with an incredible five month journey to India, Nepal and Tibet!) After all these years, surfing is still such a vital part of my life. It has taught me much, in ways no university could. In order to surf, one must first learn the ocean; the rip tides, currents, the difference between high and low tide, reef formations, channels, the type of break (sand bar, shore break, reef break, sand break), the size of the waves, the direction of the winds, and the weather conditions in general.

The amount of fun to be had on a wave is determined by all these factors, as well as the type of board you are riding, your own physical and mental condition, and luck! They always say, the best surfer is the one having the most fun...

Over the years, I have also begun to appreciate my board riding predecessors; all the surfing legends in Hawaii and abroad. I also realize the responsibility I hold in maintaining our precious oceans and coastlines. For instance, global warming leads to coral bleaching which causes reef damage, and can ultimately destroy large marine ecosystems as well as many surf breaks. Organizations such as the Surfrider Foundation, provide communities with education environmental situations pertinent to our coasts and oceans, and with the opportunity of getting involved with their various campaigns.

I have also realized the many benefits surfing has bequeathed upon me - physical fitness, mental clarity and focus, stewardship, and gallons upon gallons of sheer stoke. It's a great way to catch up with friends, and meet new people (buzz around town is that surf breaks are the new golf links). All this talk of waves reminds me... I'm late for a glassy sunset surf at Sandy's! ■

Surfing in Hawaii, Resources:

Books: ♦Eddie Would Go book ♦Surfer Girl - A Guide to the Surfing Life, by Sano'e Lake

Films: ♦Heart of the Sea, Kapolioka'ehukai, Documentary about Rell Sunn ♦Riding Giants, History of Big Wave Surfing ♦Step Into Liquid

Websites: ♦Ecology: www.surfriderfoundation.com

♦Surfer girl Carissa Moore's blog: www.carissamoore.com

ABOUT THE AUTHOR

APRIL LEE WORKS AT HONOLULU ACADEMY OF ARTS AS PROJECT MANAGER FOR EXHIBITIONS, PUBLICATIONS, SCHOLARLY SYMPOSIA, AND GOOD TIMES IN GENERAL. IS A DARK CHOCOLATE ENTHUSIAST. LOVES DRAWING EXPLOSIONS AND ABSTRACTIONS OF TWEAKY FREAK-OUTS, EXPLORING BEACHES, RUNNING THROUGH SOFT SAND, PEERING AT TIDE POOLS AND LAVA TUBES AND GETTING CRUSHED IN THE SURF ENDLESSLY.

CHRONICLES OF A BRAND NEW TEACHER



STARRING KARI

I AM IN AN UNFAMILIAR ROOM IN MY BRAND NEW GROWN UP CLOTHES AND NERVOUS BODY LANGUAGE.



THERES 30 PEOPLE IN HERE AND THEY ARE ALL STARING AT ME.



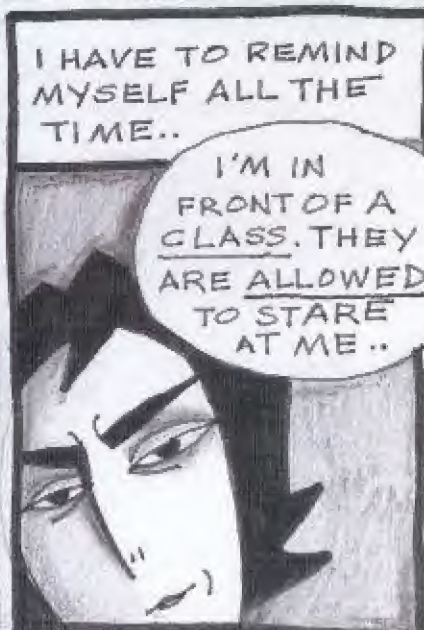
WHY ARE THEY STARING? THIS IS FREAKING ME OUT!

IS MY HAIR ALL FUNNY?

IF THEY STARE ANY LONGER, I WILL CALL THE COPS



WHAT ARE WE GOING TO DO IN CLASS, MISS?



I HAVE TO REMIND MYSELF ALL THE TIME..

I'M IN FRONT OF A CLASS. THEY ARE ALLOWED TO STARE AT ME..

WRITING/ILLUSTRATION: AMRUTA PATIL



THE KITE RUNNER

TEXT: RICHA KAPOOR
PHOTOGRAPHS: FRANK MCNERNEY

Thumbing through my copy of *The Kite Runner* I come across a scene that I think captures my experience of engaging with the book. In the scene, Amir and Hassan climb together the bowl-shaped hill north of Amir's house. With memories of many languid, summer days spent there, resting against the cool, decaying wall of the abandoned cemetery, sitting in the dappled shade of the pomegranate tree, eating its ripe fruit, reading stories, Amir and Hassan face each other for the last time. With pages of the story he had promised to read Hassan lying on the ground, fluttering in the breeze, Amir picks up a pomegranate instead and hurls it at Hassan. The ripe fruit strikes Hassan on the chest and explodes in a spray of pulp, seeds and streaming juice. Hassan stands dazed. Again and again and again, Amir pelts Hassan with fruit till the latter is smeared red all over.

I feel like Hassan after putting down *The Kite Runner*. Like him, I am colored completely. The tale has stained me a rich, deep, dark hue that might

fade somewhat with time, but is never quite going to rub off completely.

So what is the *The Kite Runner* about? It is a tale of loyalty and love, guile and guilt, memory, and of course, redemption. Amir and Hassan, two boys growing up in the same household, though worlds apart. Amir, born to a wealthy Pashtun father and Hassan, a poor illiterate Hazara. Striving to be the son his father always wanted, Amir takes on the weight of living up to unrealistic expectations and places the fate of his relationship with his father on the outcome of a kite running tournament, a popular challenge in which participants must cut down the kites of others with their own kite.

Amir wins the tournament. But the aftermath of it is that young Hassan is sexually brutalized by some teenagers in a neighbourhood alley. Amir's failure to defend his friend from this assault haunts him for the rest of his life. The backdrop of childhood sexual assault (*see article on next page*) remains throughout the book, even as the lives and fates of the characters, as well as the political and historical events in Afghanistan unfold. The coup against Zahir Khan, the coming of the *Roussis*, the conflict between the Afghans and the *Mujahedins*, the setting up of the puppet-government of Najibullah, and then, the terror reign of the Taliban.

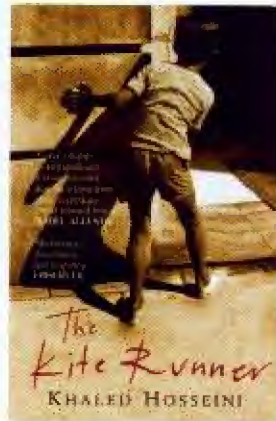
On another level, *The Kite Runner* is about an Afghani's sense of irreparable loss – the destruction of his beautiful *watan*, the lost, wasted lives of his fellow countrymen. Hosseini details the indignities of the lives of both kinds of Afghans, those who, like Amir, Baba and General Taheri, fled to find political asylum elsewhere and those who stayed back in Afghanistan. Baba gets his hands grubby, calloused, with dirt under his fingernails, working as an assistant at a gas station and General Tahiri, despite the outward bravado has to subsist on foodstamps, while those who stayed back in Afghanistan, like the former university teacher of Farsi Poetry who Amir comes across in Taliban-ruled Kabul, is reduced to begging on the streets in a threadbare *chapan*.

Of course the spirit of a warm, wonderful, brave people, and their small joys are detailed too. The book wraps itself around you, and pulls you deep within every moment, whether it is Amir and Hassan drinking warm coca cola and slurping on rosewater ice cream, or the unique vocabulary of kite-flying. The moments are too numerous to list here.

The beauty and the rhythm of the everyday and the unspectacular

- more precious since that way of life is fast disappearing - makes a rich, ethnography of *The Kite Runner*.

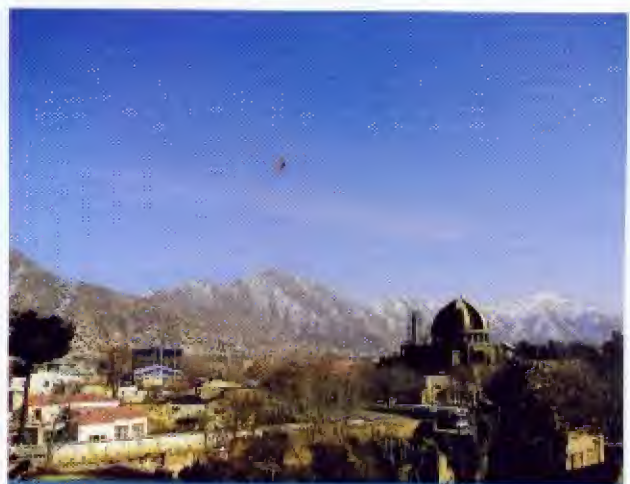
Hosseini has the ability to capture sensitive, minute details of the Afghani way of life - something the rest of the world knows little about, and perhaps cares about even less. A significant part of the story concerns the writer's desire to record, to commit to posterity, a culture that is disappearing. To tell those people "sipping lattes at Starbucks" that there is much more to Afghanistan than the battle for Kunduz and much more to Afghans than their caracul hats and *chapanis*. ■



The Kite Runner
by Khaled Hosseini
Publisher: Riverhead Trade
ISBN: 0747566534

ABOUT THE AUTHOR

RICHA KAPOOR LOVES FOLK ART, ANDY WARHOL'S POP ART COWS AND HOT PINK PETUNIAS. DIVIDES HER TIME BETWEEN DOCTORAL DISSERTATION WORK, SHOULDER-STANDS, COOKING ONE-DISH MEALS AND REVIEWING FILMS FOR FAMILY AND FRIENDS.



“ I wanted to write about Afghanistan before the Soviet war because that is largely a forgotten period in modern Afghan history. For many people in the west, Afghanistan is synonymous with the Soviet war and the Taliban.

I wanted to remind people that Afghans had managed to live in peaceful anonymity for decades, that the history of the Afghans in the 20th has been largely pacific and harmonious.

”

Khaled Hosseini, on the Newsline website, www.newsline.com



WHY THE KITE RUNNER MATTERS

TEXT: AMIT DESAI

PHOTOGRAPH: FRANK MCNERNEY

As I read this wonderfully moving book my feelings and thoughts cruised through many planes – be it the political events described in the book, the madness of war, the suffocation inherent to class systems, the rootedness of culture and rituals, the story of migrants, the strength of human spirit and a number of equally important and moving issues.

But for me the deepest stirring that occurred was with the devastating loss of innocence. Of children. The crushing of a tender spirit which hasn't yet fully flowered. And the psychological burden that its going to cause, sometimes for life.

Child Sexual Abuse (CSA). A subject crying for attention. A world wide phenomenon. Brought to light only when a story carries "news worthiness". But the fact remains that sexual abuse of children exists everywhere. Only in the recent past has this heinous crime started getting some attention, through people who dared to speak up and through cases which were hard to ignore. In India still, however, this subject is still only discussed in a minority of urban homes and schools. That also in a way that skirts the real problem. For most people this does not exist. Or it's a part of growing up. What's there to talk about?

Some statistics below might give this the sense of gravity it deserves.

Excerpted from 'Frontline', Vol 20, Issue 21, October 11-24, 2003.

According to the World Health Organisation (WHO), one in every four girls and one in every seven boys in the world are sexually abused. But Lois J. Engelbrecht, a researcher working on the problems of child sexual abuse, quotes studies showing that over 50 per cent of children in India are sexually abused, a rate that is higher than in any other country.

The Delhi-based Sakshi Violation Intervention Centre in a 1997 study that interviewed 350 schoolchildren, found that 63 per cent of the girl respondents had been sexually abused by a family member; 25 per cent raped, and over 30 per cent sexually abused by the father, grandfather or a male friend of the family.

A 1999 study by the Mumbai-based Tata Institute of Social Sciences revealed that 58 of the 150 girls interviewed had been

raped before they were 10 years old. RAHI, a Delhi-based organisation that provides support to victims of sexual abuse, reports that of the 1,000 upper and higher-middle class college students interviewed, 76 per cent had been abused as children, 31 per cent by someone known to the family and 40 per cent by a family member, and 50 per cent of them before the age of 12.

Child sexual abuse seems to be pervasive because it is hardly spoken about. And even if it is, there are hardly any legal measures to deal with it. Court proceedings, if things come to that level, are a long-drawn, traumatic process. This is what the abusers take advantage of. Data and statistics hardly exist, given that cases never get reported to the police. Most often, sexually abused children make no noise about their traumatic experiences.

It is this that encourages offenders. This secrecy has to be broken; by laying stress on talking to children about sexual abuse, listening to them, believing them, and recognizing symptoms such as physical complaints and behavioral and psychological changes. And bringing this topic up with children at the right age in homes and more importantly in schools.

What most people don't realise is once the issue is reported that's just the start rather than the end. What is most crucial is re-creating the emotional wholeness of the child. Support, love, deep caring and no judgement help. By any shot it's a long journey that the abused child will have to make to become whole again. But its possible. There are countless stories which inspire.

Wish more books - fiction, non fiction, story books, schools text books and even media like magazines, newspapers, movies, television etc bring forth and deal with this grave and all pervasive issue. In a way that does not confuse the child, but empowers her. In a way that don't sensationalize but educate. Speaking up about it is not just one of the ways to bring to the forefront, rather it is the only way. A small attempt of that is through this article. ■

ABOUT THE AUTHOR

AMIT DESAI HAS AN MBA (OF LITTLE USE) AND A DECADE OF WORK EXPERIENCE IN MEDIA, BANKING AND ADULT LEARNING (TOTALLY USEFUL). IS A COMPULSIVE MOVIE GOER AND FOODIE WITH A DEEP INTEREST IN COMPARATIVE MYTHOLOGY. IS A SURVIVOR OF CSA.



PHOTOGRAPHS: FRANK MCNERNEY
TEXT: LUKE HAOKIP

While on an outdoors programme in Chandratat several years ago, an American named Frank McNerney encountered an unflappable young man (Anustup Nayak, incidentally) who would talk about his journey from working in the US to joining an organisation that hoped to change the face of education in India.

An audacious idea, thought Frank. But it struck him suddenly at that moment that he had been thinking too small. So a man with a promising career as an international banker on the west coast of the US - he worked with companies like Meryll Lynch before running a software company of his own - gave it all up to become a teacher educator based in war torn Afghanistan. Frank is now involved with teacher training for secondary schools funded by USAID in Afghanistan. He works with the faculty of educators who train future secondary teachers. He is also a graduate scholar at the University of Massachusetts, Amherst.

The images that appear with 'The Kite Runner' review, as well as the ones in this photo feature have been taken by Frank in Kabul and other cities. They are special not just because of the exquisitely beautiful people and places they capture - but also because they are testimony to Frank's transformation. Its a long journey from Chandratat to Kandahar. ■

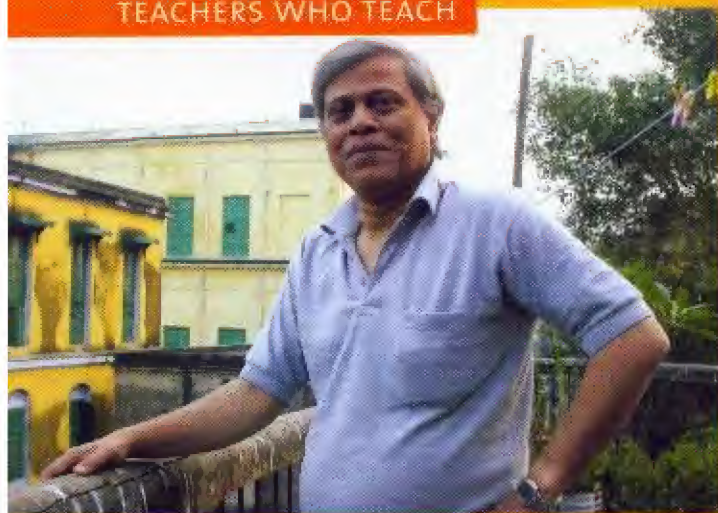




"The Afghans are excited about positive change in education but feel helpless at the state of things now," says Frank. "They need exposure, but not the US kind. Something closer to home, where things have worked out well - like India - would be ideal."



Frank McNerney would like to start an exchange of emails between Afghans and Indian teachers to initiate the process. Mail fmcnerney@hep-af.org



Abhijit Sircar has taught for thirty years in Kolkata and has a huge fan following. Son of legendary playwright Badal Sircar, he has also delved into writing plays and won accolades from the British Council.

INTERVIEW AND PHOTOGRAPH: AVIK CHATERJEE

WHAT WHERE AND HOW LONG HAVE YOU BEEN TEACHING?

I teach classes 9 - 12 at St James' school, Kolkata. I started teaching physics and math in 1977. But since 1986, I have been teaching computers.

SCHOOLS YOU WENT TO AS A CHILD?

Shishu Niketan...Scottish Church School...Ram Krishna Mission, Narendrapur...then my father shifted to Nigeria and I was enrolled at Union Secondary School in Enugu. Later I was at the La Martiniere School for boys...

WHY 'TEACHER' INSTEAD OF ANYTHING ELSE?

Teaching runs in my family...everyone in my family has taught full time or for some time in their life...my grandfather was a principal of a college...my two aunts were professors in colleges...my father taught at one point in his life...

MOST FREQUENT DISAPPOINTMENT FACED WHILE TEACHING...

1) Extra curricular activities during class hours make the classes take a backseat! Half the boys are out of class doing something else and missing classes.
2) Supervisory classes...if a teacher is absent you need to sit in a class...it is a waste of time...because I cannot really do anything with that class...

PREPARING FOR CLASS EVERY DAY?

After 30 years of teaching I do not need to prepare for my classes. I always had to learn and relearn in these thirty years though. That I guess is preparing. When I was in college the first electronic calculator came in the city...so I had to learn all by myself...never had a teacher except the computer and books. See the only thing that changes is the syntax...the basics are the same. I never carry a text book to class and tell my students not to carry text books either.

DEALING WITH A VARIETY OF STUDENTS

Luckily my subject is such that boys with higher abilities opt for this subject. 90% of my students come better equipped to handle the subject. Sometimes there is one kid who finds it hard to grasp and that delays the class...so I generally sit with that kid in free time to pull him up to the class's standard. Sometimes boys come out with better algorithms than I...I have no hassles in acknowledging their superiority...I feel proud.

MOST DIFFICULT QUESTION A STUDENT HAS ASKED

"Why are we doing this?" I really enjoy it when a problem stumps us. One big challenge was defining 'Pointers'...it took me a long time to learn it myself...very challenging...once I understood it became very easy for me to teach...

KEEPING YOURSELF ABREAST WITH DEVELOPMENTS IN YOUR FIELD

See...computers are not just my profession...they are my love...my passion...my life. I buy the latest gadgets, read magazines, explore the net. Everyday I learn something new.

ASPECT OF YOUR PROFESSION THAT STILL MAKES YOU NERVOUS

Not after 30 years. Well, actually there is one worry...if the council decides this subject is not necessary then I do not know what I will do. See in I.C.S.E students pick one subject between Math, Science and Computers...thankfully they have introduced Computer Applications. My worry is if the subject itself becomes defunct.

ANY GENERATION GAP PROBLEMS?

None. I never had any problems to interact with them. Like the music I listen to like rolling stones, Pink Floyd are still listened to by this generation.

TRICK TO ENLIVENING A CURRICULUM YOU CAN'T CHANGE

I always bring in examples and similes...you know like comparing a theory to practical...lets say we are writing a program on sorting...I actually make the class sort themselves according to their height or their birth days...so using humans to do a work instead of computers...so basically doing a work using non computer jargon and then redoing it using computer languages.

FAVOURITE BOOKS

Little Prince, Jonathan Livingston Seagull, Up the Downstairs Case, Lord of the Rings trilogy...

OTHER HOBBIES AND EXTRA CURRICULARS

In my different phases I have tried my hand at theatre, math, magic, puzzles, origami, block printing, writing plays. I love writing plays. 'Was awarded four times consecutively as the best playwright by British council...

PLANS AFTER RETIREMENT

In Kolkata a teacher hardly retires...no dearth of jobs for an experienced teacher...so if I do anything at all after my official retirement I will stick to teaching. ■

ARM YOURSELF WITH THE TERMINOLOGY AND EDUCATOR SPEAK USED THE WORLD OVER

ALTERNATIVE ASSESSMENTS

Ways other than standardized tests to get information about what students know and where they need help. Could include oral reports, projects, performances, experiments, and class participation.

LEARNING OBJECTIVES

A detailed description of a specific level of student achievement expected of students at particular ages, grades, or developmental levels; academic goals set for each grade level.

CHARTER SCHOOLS

Publicly funded schools that are exempt from many state laws and regulations for school districts. They are run by groups of teachers, parents, and/or foundations.

COMMUNITY-BASED LEARNING

Students, faculty, administrators, and community members working together to create new learning opportunities within local communities.

ENGLISH AS A SECOND LANGUAGE

Classes or support programs for students whose native language is not English.

FORMATIVE ASSESSMENT

Any form of assessment used to evaluate students' knowledge and understanding of particular content and then to adjust instructional practices accordingly to improve student achievement in that area.

STUDENT-TEACHER RATIO

The total student enrollment divided by the number of full-time equivalent teachers.

INTEGRATED CURRICULUM

Practice of using a single theme to teach a variety of subjects. It also refers to a interdisciplinary curriculum, which combines several school subjects into one project.

INTERNATIONAL BACCALAUREATE (IB)

A rigorous college preparation course of study that leads to examinations for highly motivated high school students. Students can earn college credit from many universities if their exam scores are high enough.

PHONICS

An instructional strategy used to teach reading. Helps beginning readers by teaching them letter-sound relationships and having them sound out words.

PORTFOLIO

A collection of various samples of a student's work throughout the school year that can include writing samples, art work, examples of math problems, and results of science experiments.

RUBRIC

A grading or scoring system. Scoring tool that lists the criteria to be met in a piece of work. Its also describes levels of quality for each of the criteria. These levels of performance may be written as different ratings (e.g., Excellent, Good, Needs Improvement) or as numerical scores (e.g., 4, 3, 2, 1).

SPECIAL EDUCATION

Special instruction provided for students with educational or physical disabilities, tailored to each student's needs and learning style.

DARJEELING SCHOOL'S UNIQUE TEST

West Bengal. When 28 boys from St. Joseph's, Darjeeling (aka North Point), pass their board exams in 2007, they will be given a unique certificate of merit - that of 'honesty'. The reason: they desisted from cheating, even in the face of temptation, for two whole years.

The school principal Father Kinley Tshering, had challenged senior students two years ago, asking if they could promise to write their exams without invigilation. No class was allowed to take up the challenge unless every boy in the class agreed to assume responsibility for himself and his class. The class of 11th commerce finally stood up to the challenge.

During exams, the boys themselves collect the papers from the staff room, distribute them amongst examinees, take responsibility of finishing the paper on time, collect the scripts and give them back to the teachers for assessment.

The Council for Indian School Certificate Exams, Delhi, which conducts the ISC examinations, is aware of the experiment. "Though we will not be able to let the boys write their ISC examinations without invigilators, it sure is a commendable effort," said a Delhi official.

THE PRIEST AND THE FOOTPATH UNIVERSITY

Maharashtra. Father Trevor Miranda, seated in a chawl room near the railways tracks of Kalva (north central Mumbai) teaches a class of 30.

Founder of REAP (Reach Education Action Programme), a mass literacy movement working from the hutments dotting railway tracks from the Churchgate to Virar and CST to Kalyan.

Miranda has created hundreds of small informal schools inside slums, and a network of willing teachers. Illiterate adults attend these centres along with children. And Miranda renders his services absolutely free.

PARENTAL INPUTS IN SCHOOL EDUCATION

Maharashtra. In a city wide survey conducted amongst teachers and parents by DNA Academy, it was found that schools in Mumbai are moving towards a new model of parent-teacher led collaboration. Certain trends, indicative of qualitative parental interaction were observed -

- 1) Parents' involvement in evaluation and assessment
- 2) A system of informing parents about volunteer programmes available in the school
- 3) Parent contribution taken into consideration for important programs targeted at student growth.
- 4) Parents are informed about what is expected of their wards in terms of behaviour and academics
- 5) Common goals are recognised and worked upon by parents and teachers alike.

SPECIAL GARDEN, BUILT BY SPECIAL PEOPLE

New Delhi. The garden in Chanakyapuri's 'NDMC School for Special Children' is a therapeutic one. It has been built from scratch by very special people - children with Down's syndrome and other challenges.

With a little technical help from experts, the children have done everything - from laying down rocks, bringing in soil, planting medicinal plants and flowers. The garden is therapeutic for another reason. "...it has features that allow the use of all the senses of a special child - motor senses, reflexes - and helps them focus on a healing external activity," says Archana Prabhakar, the principal. The medicinal plants in the garden include Aloe Vera, Brahmi, Vinea Rosea and Lycopersculum.

WANT TO BE A TEACHER? PROVE YOUR APTITUDE FIRST

New Delhi. Getting into a teachers' training college may not be so easy any more. Candidates may have to establish that they want to be in a classroom, and are not wandering into it by chance.

The National Council of Educational Research and Training (NCERT) wants the government to introduce a psychological test to aptitude for teaching before candidates are admitted to BEd courses. (Currently, scores of school-leaving or graduation exams are the criteria for selection).

Educators say that there is a crisis in the quality of teaching. Despite a high enrollment rate, students are learning practically nothing even after completing classes V and VI. Even those teachers who regularly take classes are not able to communicate with the students. If school teachers are expected to bring about a revolution in their approach to teaching, that same approach must precede and find a place in the colleges of education.